DOCUMENT RESUME

| | |
|---|---|
| ED 449 927 | RC 022 717 |
| AUTHOR | Kannapel, Patricia J.; Aagaard, Lola; Coe, Pamelia; Reeves, Cynthia A. |
| TITLE | Elementary Change: Moving toward Systemic School Reform in Rural Kentucky. |
| INSTITUTION | AEL, Inc., Charleston, WV. |
| SPONS AGENCY | Office of Educational Research and Improvement (ED), Washington, DC. |
| ISBN | ISBN-1-891677-09-8 |
| PUB DATE | 2000-00-00 |
| NOTE | 254p. |
| CONTRACT | RJ96006001 |
| AVAILABLE FROM | AEL Distribution Center, P.O. Box 1348, Charleston, WV 25325-1348; Tel: 800-624-9120 ($20.00). |
| PUB TYPE | Books (010) -- Reports - Evaluative (142) |
| EDRS PRICE | MF01/PC11 Plus Postage. |
| DESCRIPTORS | Community Involvement; *Educational Change; *Educational Needs; Educational Objectives; Educational Policy; Elementary Education; Elementary Schools; Leadership Training; Professional Development; Program Evaluation; Qualitative Research; *Rural Schools; School Based Management; School Districts; State Legislation; State Standards |
| IDENTIFIERS | Kentucky; *Kentucky Education Reform Act 1990; *Policy Implementation; Systemic Change |

ABSTRACT

From 1990 to 2000, a qualitative study of the implementation of the Kentucky Education Reform Act (KERA) was conducted in four small rural school districts in Kentucky. KERA reflects key components of what would later be termed "systemic reform": a unifying set of goals that all students must attain, a coherent system of instructional guidance, and a restructured governance system. In addition, KERA has other components, such as the ungraded primary program. This book presents findings from the second phase of the 10-year study, focusing on the effects of KERA on curriculum, instruction, and student learning in six elementary schools in the four districts. In all six schools, student achievement improved, but in five schools, teachers focused more on improving whole-school performance on achievement measures than on improving the learning of each student, and had difficulty raising their expectations for low-income and minority children. KERA reforms increased classroom writing, the variety of instructional strategies, integration of subject matter, classroom computer use, and open-ended response and portfolio items for classroom assessment. However, teachers had difficulty moving beyond a teacher-directed approach, and only a few integrated technology effectively into the curriculum. Testing for accountability became the focus of the assessment system, and the KERA goal of continuous performance-based student evaluation was neglected. School-based decision-making councils did not make most key decisions as intended by KERA. The findings also note the importance of school leadership accountability goals and the need for more time for teachers in meeting school professional development. Ten appendices present KERA goals; dissemination efforts; data collection and research questions for both phases

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of the study; interview protocols; and characteristics of parents, students, and community members interviewed. (Contains 151 references.) (TD)

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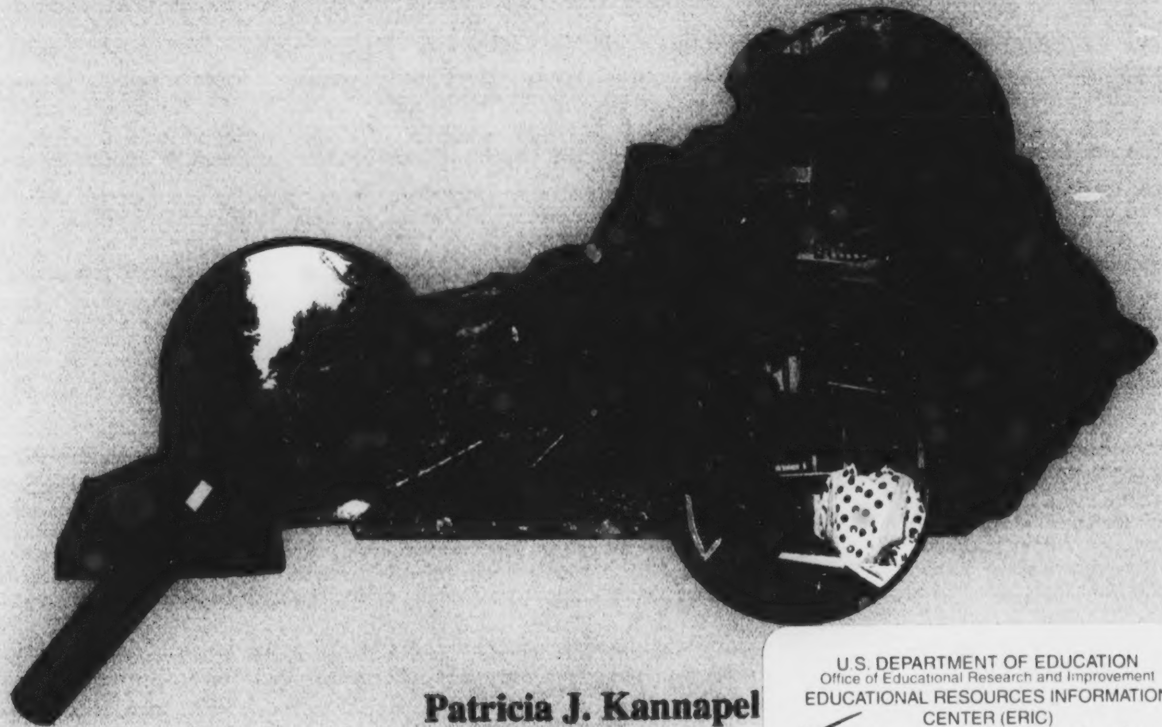
# Elementary Change

## Moving toward Systemic School Reform in Rural Kentucky



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# Elementary Change

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## Moving toward Systemic School Reform in Rural Kentucky

by

Patricia J. Kannapel

Lola Aagaard

Pamelia Coe

Cynthia A. Reeves

AEL's mission is to link the knowledge from research with the wisdom from practice to improve teaching and learning. AEL serves as the Regional Educational Laboratory for Kentucky, Tennessee, Virginia, and West Virginia. For these same four states, it operates the Eisenhower Regional Consortium for Mathematics and Science Education. In addition, it serves as the Region IV Comprehensive Center and operates the ERIC Clearinghouse on Rural Education and Small Schools.

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ISBN 1-891677-09-8

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The districts and schools studied were promised anonymity. Therefore, pseudonyms are used through this report to refer to the districts; the schools studied; and the teachers, administrators, parents, and students.

This publication is based on work sponsored wholly or in part by the Office of Educational Research and Improvement, U.S. Department of Education, under contract number RJ96006001. Its contents do not necessarily reflect the views of OERI, the Department, or any other agency of the U.S. government.

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# Contents

Executive Summary ..... vii
Preface ..... xv
Acknowledgments ..... xvii

Part One: Setting the Context ..... 1
  Chapter 1. The Kentucky Education Reform Act ..... 3
  Chatper 2. The AEL KERA Study ..... 21

Part Two: Elementary School Reform ..... 37
  Chatper 3. Orange County Elementary School ..... 41
  Chapter 4. Kessinger Elementary School ..... 71
  Chapter 5. Dyersburg Elementary School ..... 99
  Chapter 6. The View Across Elementary Schools ..... 121

Part Three: Policy Issues for Systemic Reform in Kentucky ..... 147

**Appendixes**

Appendix A. KERA Learning Goals and Academic Expectations ..... 159
Appendix B. Disseminatin Efforts of AEL KERA Study, 1990-2000 ..... 165
Appendix C. Research Questions for 1996-2000 Research Phase 169
Appendix D. Research Questions for 1991-1995 Research Phase 171
Appendix E. Data Collection for 1996-2000 Research Phase ..... 175
Appendix F. Data Collection for First Three Phases of Study (1990-91, 1991-95, 1996) ..... 177
Appendix G. Interview Protocols, 1996-2000 Research Phase ..... 185
Appendix H. Characteristics of Target Students at Each School Studied ..... 227
Appendix I. Parents/Guardians of Target Students ..... 229
Appendix J. Community Members Interviewed ..... 231

Bibliography ..... 233

# Executive Summary

From 1990 through 2000 AEL, Inc. conducted a qualitative study of the implementation of the Kentucky Education Reform Act of 1990 (KERA) to provide feedback to policymakers on the evolution of an ambitious, statewide systemic reform effort in a predominantly rural state. The study focused on the implementation of KERA in four small, rural school districts in western, central, and eastern Kentucky. After 1995—when reform had been in place long enough that one might expect changes in classroom education—AEL researchers concentrated on assessing the effects of KERA on curriculum, instruction, and student learning in six elementary schools in the four districts.

KERA was one of the first attempts to implement a kind of reform that would later be termed *systemic reform.* Although KERA predates the development of a clearly articulated systemic reform theory, it closely reflects the key components of systemic reform as described by Smith and O'Day (1991): a **unifying set of goals** that *all* students must attain; a **coherent system of instructional guidance** including curriculum frameworks, locally developed curricula, professional development, and assessment and accountability mechanisms; and a **restructured governance system**. The KERA legislation contained all of these features plus additional components of which the **primary program** is one of the more prominent.

Using these components of systemic reform as a conceptual framework, this report addresses four basic **research questions**, examined during the implementation of KERA in six Kentucky elementary schools:

1. To what extent and under what conditions did the schools help *all* students achieve KERA goals?
2. To what extent and under what conditions did the schools

implement curriculum, instruction, and classroom assessment practices consistent with reform goals?

3. To what extent and under what conditions did the schools make key decisions about how to improve student learning?
4. Did the implementation of the primary program contribute to KERA goals?

## Study Methods

For the first five years of the study (1990-1995), the authors of this report studied KERA implementation in all 20 schools in four rural school districts in Kentucky. To study KERA in greater depth, the researchers narrowed the focus of the study in 1995 to the experiences of the class of 2006 in six elementary schools in the four districts—a group whose entire schooling career had been administered under KERA. The districts and schools studied were promised anonymity; therefore, pseudonyms are used through this report to refer to the districts, the schools studied, and the teachers, administrators, parents, and students.

To answer the research questions, from 1996 to 1999 the researchers observed more than 300 hours of classroom instruction; conducted more than 400 interviews with about 140 people, including educators, parents, students, and community members; and analyzed documents such as student work, test results, school-based decision making (SBDM) council minutes, and school transformation plans. This report shares findings from the six schools studied along with descriptions of their contexts. Many of the findings hold true across multiple sites and often agree with and offer possible explanations for the findings of other studies of KERA.

## Findings and Recommendations

The following sections summarize findings associated with each of the research questions. Policy recommendations are set forth immediately after each summary.

## Helping *All* Students Achieve

After KERA was implemented, achievement improved for Kentucky's elementary students on all available measures and for middle and high school students on the state performance assessment. In the 1995-1999 phase of the AEL study, the school with the highest proportion of students qualifying for free and reduced-price lunch—Orange County Elementary School (OCES)—improved more on state assessment results than any of the other five schools studied, and posted relatively high absolute values on the accountability assessments. The OCES faculty adopted the central KERA philosophy of helping *all* students achieve and used various KERA components to advance this mission. The school also created strategies to track each student's progress and to adapt instruction to individual needs.

In all six schools, observation and interview data revealed that the KERA accountability program motivated educators to encourage high performance in students who had not previously been expected to do well. These students' performances during KERA implementation may have contributed to teachers' reports that the students were more capable than the teachers had expected. Each year on statewide surveys conducted by the Kentucky Institute for Education Research (1999), more educators expressed agreement with the KERA philosophy that all students can achieve. Nevertheless, in five of the six schools studied, KERA's overall objective was frequently lost in the press of implementing specific KERA initiatives (e.g., professional development, school-based decision making, primary program). Observations and interviews conducted in this study suggest that teachers were focused more on improving whole-school performance on achievement measures than on improving the learning of each and every student. Except at OCES, teachers had difficulty raising their expectations for children, especially those from low-income and minority households, and developing strategies to help each and every child achieve KERA goals.

**Recommendation 1.** Education agencies at every level need to incorporate into all KERA-related activities an emphasis on and strategies for improving the learning of *each* child as a necessary strategy for improving test scores for all children.

## Curriculum, Instruction, and Assessment Practices

**Curriculum and Instruction.** The findings of the 1995-1999 AEL study indicate that increased funding and improved professional development, combined with pressure from the KERA assessment and accountability program, led to greater emphasis on writing in the classroom, greater variety of instructional strategies and materials, alignment of the curriculum with the state assessments, increased integration of subject matter, greater use of computers in schools, and increased use of open-ended response and portfolio items for classroom assessment. Study participants reported that these changes provided focus to the curriculum, made classrooms more interesting, and increased communication and collaboration among teachers.

Study results also provide evidence that deep, long-lasting changes in curriculum and instruction have been difficult to achieve. Teachers reported they were unsure how to keep accountability indices improving over the long term and became tired and frustrated with the effort. In addition, data from this study reflect that teachers had difficulty moving beyond a teacher-directed approach emphasizing the memorization of facts because they did not know how to "teach for understanding" or did not have the time or support structure to learn. In addition, many teachers expressed the belief that students must have strong grounding in basic skills before attempting more challenging work. Only a few teachers were observed to have integrated technology effectively into the instructional program.

**Recommendation 2.** If the implementation of KERA is to be successfully continued and refined, state and local education agencies, as well as professional development providers, need to create and implement professional development and technical assistance opportunities that assist teachers in (1) teaching the higher-order skills defined in KERA goals five and six and (2) integrating technology into the classroom instructional program.

## Assessment and Accountability

Kentucky took a bold step in mandating the development of a primarily performance-based assessment of student achievement. The original intention was that there would be two parallel assessment systems: one that would produce student achievement data to be incorporated into an overall school accountability system and one that would produce continuous assessment of student achievement in the classroom to be used for diagnosing and responding to individual student needs. However, it proved extremely difficult to develop a performance-based instrument valid and reliable enough to be used for accountability purposes, and the assessment became less performance based over time. In addition, testing for accountability became the clear focus of the assessment system, and the projected continuous assessment was neglected. Data from the 1995-1999 AEL study indicate that the assessment and accountability program led many teachers to focus heavily on improving assessment scores. In addition, the assessment and accountability program alone has been insufficient to bring about the kinds of classroom changes needed to achieve KERA goals.

**Recommendation 3.** State policymakers should continue to develop the KERA assessment and accountability system in ways that provide positive incentives for educators to create classrooms in which each child is given the opportunity to achieve Kentucky's learning goals and academic expectations.

## School-Based Decision Making (SBDM)

KERA mandated that key policy decisions influencing student learning be moved to the school level. The intended vehicle by which this was to be accomplished was through the formation of SBDM councils, which are representative councils of school administrators, teachers, and parents. In the six elementary schools studied, however, SBDM councils were not the primary means by which curricular and instructional decisions were made. Rather, committees of teachers and school administrators that sometimes included parents made most of the key decisions.

**Recommendation 4.** If SBDM councils are to be key instruments for school-level decision making, state and local education agencies need to provide councils with better information, guidelines, and training on how to be effectively involved in policy decisions about curriculum, instruction, and student learning; and on how to involve parents and minority representatives in more meaningful ways.

## The Primary Program

The primary program was designed, in part, to model instruction that would help students achieve KERA goals and expectations. The state-mandated "critical attributes" of the primary program required teachers to implement new instruction, grouping, and assessment practices to allow students to progress at their own rates. Data from the 1995-1999 AEL study revealed that full implementation of the primary program was difficult to accomplish due to the time and energy required for designing and implementing changes, and the lack of clear linkages between the primary program and the KERA assessment and accountability system. Study data further revealed that because of these problems, teachers and school administrators backed away from the initial changes they had made in the primary program.

**Recommendation 5.** If the primary program is to be effectively implemented, state and local education agencies need to provide teachers with professional development and technical assistance in creating and operating the primary program in ways that help students achieve Kentucky's learning goals and academic expectations.

## Leadership

Finding and keeping quality administrators is difficult, especially in rural areas with few resources. Yet, the data obtained in this study clearly illustrate the pivotal role of district and school leadership in meeting school accountability goals. For example, in Orange County, strong, stable leadership at both the district and school levels was found to be associated with the development of a cooperative, collegial school culture and a coherent school vision centered on KERA goals. In contrast, Lamont County district and school leadership changed frequently, and a coherent school vision for the implementation of KERA at Kessinger Elementary was not developed.

**Recommendation 6.** State and local education agencies need to continue efforts to develop instructional leadership skills in school principals; they should also create strategies to identify, recruit, and assist skilled local educators in obtaining principal certification (especially in rural areas).

### Time

The data collected in this study clearly indicate that the requirement that schools help *all* students meet Kentucky's learning goals and expectations requires additional teacher time at several points in the implementation process. Teachers need time for intensive professional development, to plan and practice new strategies, and to confer with colleagues to analyze individual student learning and adapt teaching plans to meet student needs. In the schools studied, teachers' multiple responsibilities included participating in SBDM councils or district committees to develop and align curricula; this left insufficient time to learn new strategies and practice them in the classroom.

**Recommendation 7.** State and local education agencies need to create ways to provide teachers with the necessary time to learn about and implement the changes required by KERA.

## Summary

Systemic reform in Kentucky resulted in curricula that are more focused and aligned with state standards and in classrooms that are better equipped as well as more interesting, active, and enjoyable. Evidence from various assessment measures indicates that under KERA, student achievement has improved, at least at the elementary level. To realize its potential, the KERA effort must be sustained, with increased attention given to helping teachers create classrooms that develop basic knowledge and higher-order thinking skills for each and every child.

# Preface

The Kentucky Education Reform Act (KERA) was passed in 1990 as the result of a lawsuit filed by 66 Kentucky school districts, charging that the state's system of funding schools was inadequate and inequitable. The Kentucky Supreme Court ruled that the state's entire system of schooling was unconstitutional and ordered the General Assembly to restructure "the entire sweep of the system—all its parts and parcels" (*Rose v. Council for Better Education*, 1989). In KERA, the General Assembly enacted one of the most sweeping education reform efforts in the nation. Recognizing the significance of Kentucky's effort, AEL undertook a qualitative study of reform in selected rural school districts that began in the fall of 1990 and continued through 2000. This report presents the findings of 10 years of research on KERA in four rural school districts.

## Organization of Report

This report is divided into three parts. Part One, which includes two chapters, describes the context within which the study was conducted and provides information to help the reader understand the findings. Chapter 1 contains an overview of the reform legislation and background information on implementation at the state level. The research design is described in Chapter 2. Part Two contains case studies of three schools from the four districts studied (Chapters 3-5), followed by discussion and analysis of findings within and across the study schools (Chapter 6). Part Three identifies policy issues that warrant further attention if Kentucky's systemic reform effort is to meet its goals.

## Audience

This report is intended for education policymakers, practitioners, and researchers both within Kentucky and across the nation. The executive summary along with the conclusions and recommendations provided in Part Three may be of greatest use to policymakers who have limited time to devote to the report. Chapter 1 will be of greatest use to those outside Kentucky who want to know more about the legislation itself. The information contained there also sets the context for the findings presented in Part Two. A description of the research design, contained in Chapter 2, will interest researchers and others who want to know the bases of findings presented here. The stories of reform implementation in three very different schools presented in Part Two promise to be of interest to a variety of audiences.

# Acknowledgments

This research was made possible by staff and board members of AEL, Inc. (formerly Appalachia Educational Laboratory) and the U.S. Department of Education's Office of Educational Research and Improvement, which supported the study for 10 years. Particular credit goes to former AEL executive director Terry L. Eidell, who conceived the idea for the study, and to Pamela B. Lutz, who oversaw the research for the first nine years and used her policy expertise to help the research team develop appropriate design and dissemination efforts. We also acknowledge the contributions of Beverly D. Moore, who assisted with fieldwork, data analysis, and writing from 1992 through 1995.

The study was made possible by the cooperation of the many school board members, administrators, teachers, parents, students, and community members in the four school districts who made us welcome, provided us with the information we needed to do our work for 10 years, and gave us feedback on our findings. We have kept their identities confidential throughout the study and continue to do so now, but they know who they are. We also owe a great deal to staff at the Kentucky Department of Education, who were unfailingly polite, cooperative, and willing to take time from their busy schedules to provide us with needed information. We are indebted to those who provided frequent feedback on our research, including staff of the Prichard Committee for Academic Excellence and the Partnership for Kentucky Schools, the Legislative Research Commission and the Kentucky Office of Education Accountability, and former Kentucky Secretary of Education and Humanities Jack Foster.

Our research was greatly influenced over the years by the thoughtful advice of a peer review panel of policy researchers, which included Beth Goldstein of the University of Kentucky, Susan H. Fuhrman of the Consortium for Policy Research in Education, G.

Alfred Hess of Northwestern University, Craig Howley of AEL, and Andrew Porter of the University of Wisconsin-Madison.

Finally, we acknowledge our family members, who supported our work and kept us going.

# Part One

## Setting the Context

> Lest there be any doubt, the result of our decision is that Kentucky's *entire system* of common schools is unconstitutional. There is no allegation that only part of the common school system is invalid, and we find no such circumstance. This decision applies to the entire sweep of the system–all its parts and parcels. This decision applies to the statutes creating, implementing, and financing the *system* and to all regulations, etc., pertaining thereto. . . . Since we have, by this decision, declared the system of common schools in Kentucky to be unconstitutional, Section 183 places an absolute duty on the General Assembly to re-create and re-establish a system of common schools in the Commonwealth.
>
> *Rose v. Council for Better Education, 1989*

With these words, Chief Justice Robert F. Stephens of the Kentucky Supreme Court handed the Kentucky General Assembly a difficult task: restructuring completely the state's system of public schooling. The decision resulted from a lawsuit filed by 66 school districts, which charged that the state's system of financing schools had resulted in inadequate and unequal funding throughout the state. The Kentucky General Assembly responded to the court mandate by formulating and passing the Kentucky Education Reform Act of 1990 (KERA), which called for massive changes in curriculum, governance, and finance. The intent of changes in each of these areas, respectively, can be summarized as an effort to (a) ensure that all children achieve challenging goals, (b) rid the system of political influences, and (c) achieve equity in funding among districts.

In the fall of 1990 AEL undertook a baseline study of initial reactions to KERA in six rural school districts (Coe, Kannapel, & Lutz, 1991). The baseline study led to a longitudinal, qualitative study of KERA implementation in four rural districts, supplemented with state-level data, which began in the spring of 1991 and was ongoing through 2000. Part One of this report sets the context for the study findings by describing KERA and its implementation at the state level as well as the AEL study design and methods.

## CHAPTER 1

# The Kentucky Education Reform Act

## KERA in the National Context

Kentucky's education reform effort was part of a national movement to improve public schools. This national movement was sparked in part by the 1983 report *A Nation at Risk*, released by President Ronald Reagan's National Commission on Educational Excellence, which decried the condition of the nation's schools, called for major reforms, and kindled three successive waves of reform. Initially, states responded to the federal report by enacting top-down reforms that mandated specific curricular and instructional improvements. The second wave, which occurred in the mid- to late-1980s as a backlash against these highly centralized measures, called for decentralizing education governance by professionalizing teaching, mandating student outcomes rather than teacher inputs as measures of success, and giving teachers the autonomy to make decisions about how to help students achieve the outcomes (Carnegie Forum on Education and the Economy, 1986; Conley, 1989; Finn, 1987; Futrell, 1989; Holmes Group, 1986; Kearns & Doyle, 1988; National Governors' Association, 1986; Wise, 1988).

The third wave, known as *systemic reform*, emerged in the early 1990s and attempted to combine elements of the first and second waves. A frequently cited source of systemic reform theory is *Systemic*

*School Reform,* written by Marshall S. Smith and Jennifer O'Day (1991). Smith and O'Day argue that second-wave reforms relied too much on school-based initiatives, making large-scale reform unlikely, and focused too little attention on classroom content and pedagogy. They propose a "coherent *systemic* strategy that can combine the energy and professional involvement of the second-wave reforms with a new and challenging state structure to generalize the reforms to all schools within the state" (pp. 234-235).

According to Smith and O'Day (1991), the key strategies of systemic reform are to

- identify a **unifying set of goals** for *all* students that goes beyond basic factual knowledge to emphasize higher-order knowledge and problem solving
- develop a **coherent system of instructional guidance**, consisting of *curriculum frameworks* that describe the knowledge, skills, and attitudes expected of students at the end of long-range chunks of time; state support for schools and districts to construct *locally responsive curricula* within the structure of the state content frameworks; preservice and in-service *professional development* to ensure that teachers have the knowledge and instructional skills required to teach the content of the frameworks; and high-quality *assessment* instruments, based on the curriculum frameworks, to monitor progress toward achievement goals for *accountability* purposes
- institute a **restructured governance system** in which schools assume responsibility for providing an environment conducive to student achievement of the goals while districts and the state provide resources and a supportive environment and policies for schools

These three key features of systemic reform are prominent in the portion of KERA dealing with curriculum—the primary focus of this study—crafted by consultant David Hornbeck* and a committee of legislators and executive branch representatives. Therefore, the tenets of systemic reform as set forth by Smith and O'Day are used in this report as a framework for examining KERA and its impact. This chapter describes Kentucky's learning goals, the system of instructional guidance, and the restructured governance system. In addition, the primary program mandated by KERA, a component not singled out as part of systemic reform theory by Smith and O'Day, is described. Finally, funding for reform is discussed.

---

*Hornbeck was with the Washington, D.C., consulting firm Hogan & Hartson when he helped write this portion of KERA. He had formerly been chief state school officer in Maryland and was superintendent of Philadelphia, Pennsylvania, schools until the summer of 2000.

## KERA and Its Implementation

### Challenging Learning Goals for *All* Students

House Bill 940, or KERA, specified six learning goals. The law stated that "schools shall expect a high level of achievement of all students" (Kentucky General Assembly, 1990, p. 3). The law required schools to develop their students' abilities to

- Goal 1: use basic communication and math skills for purposes and situations they will encounter throughout their lives
- Goal 2: apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, and practical living studies to situations they will encounter throughout their lives
- Goal 3: become self-sufficient individuals
- Goal 4: become responsible members of a family, work group, or community, including demonstrating effectiveness in community service
- Goal 5: think and solve problems in school situations and in a variety of situations they will encounter in life
- Goal 6: connect and integrate experiences and new knowledge from subject matter fields with what they have previously learned and build on past learning experiences to acquire new information through various media sources (p. 3)

While these learning goals did not specify instructional strategies, the emphasis on thinking, problem solving, subject matter integration, and real-life application suggested that teachers would have to engage students in active problem solving, knowledge construction through analysis and synthesis of real-life problems, and hands-on experiences. These kinds of instructional activities are consistent with the more challenging instruction called for by systemic reform scholars (Cohen, 1995; Elmore, 1990; Gideonse, 1990; Little, 1993; Smith & O'Day, 1991). The mode of teaching required under systemic reform is sometimes referred to as "teaching for understanding," defined by McLaughlin and Talbert (1993) as happening in "classrooms where students and teachers acquire knowledge collaboratively, where orthodoxies of pedagogy and 'facts' are continually challenged in classroom discourse, and where conceptual (versus rote) understanding of subject matter is the goal" (p. 1). In addition to the instructional changes implied in the KERA learning goals, the emphasis on helping *all* students achieve the goals implied that teachers would need (among other things) to use a variety of instructional approaches that take into account students' different learning styles and background experiences.

The six learning goals were subsequently defined in terms of 75 "valued outcomes," which were to serve as the conceptual basis for curriculum frameworks and the assessment program (Foster, 1999). Opposition to KERA in general and to the valued outcomes in particular eventually led to a 1994 revision of the 75 outcomes. Responding to pressures from groups and individuals who believed that the outcomes reflected liberal values and detracted from the teaching of "basic skills," Kentucky policymakers excluded KERA goals 3 and 4 (self-sufficiency and responsible group membership) from the assessment program and revised the 75 valued outcomes into 57 "academic expectations" (Kannapel, Moore, Coe, & Aagaard, 1995a). The six learning goals and 57 academic expectations (listed in Appendix A) have been used since 1994 to guide Kentucky's curriculum and assessment program.

## Coherent System of Instructional Guidance

Kentucky's reform legislation contained most of the components of the systemic reform model proposed by Smith and O'Day (1991), including a coherent instructional guidance system: curriculum frameworks to guide districts in developing local curricula, preservice and in-service professional development to help teachers implement KERA, and high-quality assessment instruments to monitor student achievement for accountability purposes. While Smith and O'Day indicate that the frameworks should be developed very early in the process to guide local school districts in developing their curricula, this did not occur in Kentucky. Rather, the implementation of the assessment and accountability system preceded the development of curriculum guidelines, and teacher preservice education received scant attention. Components of the instructional guidance system are described below.

## Curriculum Guidelines

Jack Foster (1999), Kentucky Secretary of Education and Humanities in 1990 and a member of the task force that developed KERA, notes that the time lines for the curriculum guidance, assessment, and accountability components of KERA were not properly coordinated. To ensure school accountability for student achievement of KERA goals, the legislation called for developing a "primarily performance-based assessment program" to be implemented as early as the 1993-94 school year but no later than 1995-96. The state was directed to administer an interim testing program beginning in the 1991-92 year—the baseline used to judge student progress in 1993-94. In other words, schools were expected to have shown progress toward KERA goals by 1993-94, yet the legislation did not require that the curriculum framework be available until the summer of 1993. *Transformations: Kentucky's Curriculum Framework,* released in 1993 (Kentucky Department of Education, 1993b), contained for each of the 57 academic expectations a list of indicators for assessing student progress, ideas for making connections to real-life situations and other content areas, sample teaching and assessment strategies, suggested instructional activities, ideas for incorporating community resources, and a suggested process for local curriculum development.

Evidence from an earlier phase of this study (Kentucky Department of Education, 1998) suggests that the large, two-volume document containing the curriculum frameworks was not widely used because teachers found it too broad and cumbersome and they wanted a more specific idea of what to teach and when to teach it (AEL, 1994). Amid these complaints, the Kentucky Department of Education developed and released the *Core Content for Assessment* (Kentucky Department of Education, 1996), which specified the actual content to be assessed under KERA goals 1 and 2, the goals that focus on basic subject matter knowledge. Continuing the trend of providing ever-more-specific curriculum guidance, a third curriculum document was released in 1998: *Program of Studies for Kentucky Schools*. The *Program of Studies* outlines the *minimum* content required for all students before graduating from Kentucky high schools. The *Program of Studies* also focuses most strongly on KERA goals 1 and 2.

## Professional Development

The KERA legislation did not address preservice teacher education but did recognize professional development for practicing teachers as a key component for bringing about school and classroom change. The Kentucky legislature increased professional development funding from $1 per student in 1990-91 to $23 per student in 1995-96 (Office of Education Accountability, 1998), a funding level maintained through the 1999-2000 school year. All but the largest school districts were required to form or join professional development consortia for the five years immediately following the enactment of KERA. Regional service centers were established as branches of the Kentucky Department of Education to ensure local districts more accessibility to department personnel with expertise in implementing KERA initiatives. From 1992 to 1996 schools were permitted to use up to five instructional days for professional development (in addition to the already mandated four days). Finally, after 1992 most decisions about professional development were transferred from districts to schools.

The KERA legislation required that the first two years of professional development focus on KERA in general, school-based decision making (SBDM), performance-based assessment, the primary program, research-based instructional practices, instructional uses of technology, and multicultural sensitivity. The Kentucky Department of Education reorganized itself by the various components, or "strands," of KERA, creating an SBDM division, primary division, and so forth, and its regional service centers hired staff members with expertise in the various KERA components (Office of Education Accountability, 1995). This organizational structure contributed to a strand-by-strand mentality in the early years of KERA implementation rather than the envisioned systemic approach. Lusi (1997), who studied the role of the Kentucky Department of Education in implementing KERA, noted, "The majority of professional development offered . . . [was] within, rather than across, KERA strands, leaving integration to be done by practitioners at the local level" (p. 67). Similarly, the 130-plus hours of professional development observed by the AEL research team in the first five years of reform typically focused on specific KERA strands and often failed to connect to the larger goals of KERA.

The strand-by-strand approach has moderated somewhat over time. By 1996, when the *Core Content for Assessment* became available, many schools and districts used professional development days to work on aligning curriculum to the *Core Content for Assessment* (McDiarmid, David, Kannapel, Coe, & Corcoran, 1997; Office of Education Accountability, 1997, 1998). In 1998-99 regional service centers were reorganized to provide expertise by major instructional content areas (language arts, mathematics, science, etc.) while continuing to provide specialized consultations regarding the primary program, technology, and exceptional children (Office of Education Accountability, 1998).

The department, through its regional service centers, also developed and began offering a series of "teacher academies" aimed at deepening teachers' knowledge of specific subject matter. The academies currently target middle school teachers. Each of the eight regional service areas offers a subject matter academy in reading, science, social studies, and mathematics. Participants choose academy topics from the academic expectations, *Core Content for Assessment*, and *Program of Studies*. The academies are offered for a full week during the summer and include follow-up professional development and support during the school year (Kentucky Department of Education, 2000). Intensive professional development in reading and writing is also available through the Kentucky Reading Project and the Kentucky Writing Project.

In addition to the greater focus on the subject matter embedded in KERA learning goals, there is evidence that the professional development support structure has expanded as Kentucky educators have become experts on KERA. For instance, the Kentucky Department of Education has trained numerous teachers around the state as math and writing portfolio "cluster leaders," providing them with the latest information on portfolio development and scoring. The intention was that these cluster leaders, in turn, would pass this information on to teachers in their districts who would then be in a better position to assist their students in preparing their portfolios. Some specially trained educators (termed *Distinguished Educators*) who successfully helped schools raise their test scores subsequently established consulting businesses to serve other schools who desired their assistance (Kannapel & Coe, in press).

Improvements such as regional service centers and teacher academies illustrate the progress Kentucky has made in identifying and providing the kind of intensive, content-focused professional development educators need to teach to KERA's goals. Even so, research has shown that to teach for conceptual understanding, educators need professional development and technical assistance over a period of years to gain deeper subject matter knowledge, including opportunities to work with mentors in the classroom and meet with mentors and colleagues to evaluate their efforts and make adaptations (Ball & Rundquist, 1993; Heaton & Lampert, 1993; McCarthey & Peterson, 1993; McLaughlin & Talbert, 1993; Sykes, 1990; Wilson, Miller, & Yerkes, 1993). At present, these sorts of opportunities are in short supply in Kentucky (McDiarmid et al., 1997).

## Assessment and Accountability Program

Systemic reform proponents identify assessment and accountability as essential components of systemic reform (Business Roundtable, 1990; Elmore, 1996; Smith & O'Day, 1991). Kentucky took a bold step in mandating the development of a primarily performance-based student assessment program that would mirror the kinds of instruction needed to help students meet KERA learning goals. Assessment results would then be used to hold schools accountable for making progress toward helping all students achieve those goals. The difficulty of developing performance-based assessments valid and reliable enough to be used for accountability purposes, however, was soon painfully clear in Kentucky. Performance assessment was in the very early stages of development at the time KERA was passed, and the few models that were in place were in the formative stages (DeVaney, 1995; Noble & Smith, 1994; Rothman, 1990).

Kentucky's initial assessment design included two major components: accountability assessment and continuous assessment. Accountability assessment would measure *school* progress toward performance targets established by the state and would be administered once a year to students at selected grade levels. Continuous assessment would measure the progress of *individual students* on an ongoing basis and would be used to monitor individual student progress. The state's assessment resources, however, were focused on development and implementation of the accountability assessment, leaving few resources and little time to provide teachers with guidance and models for assessing the progress of individual students toward KERA goals (Foster, 1999; Kifer, 1994). The closest the state came to developing a continuous assessment tool was the Kentucky Early Learning Profile (KELP), an assessment tool for use in the primary grades. The KELP, however, was not linked directly to KERA goals and expectations, was not mandatory, and was not used widely around the state (Office of Education Accountability, 1999).

The accountability assessment system created for KERA was named the Kentucky Instructional Results Information System (KIRIS). The assessments were administered initially in grades 4, 8, and 12, and later spread across grades 4-5, 7-8, and 11-12. Over the years, KIRIS consisted of open-ended response questions, multiple-choice items, and on-demand writing tasks, augmented by writing and math portfolios and performance events.* Student performance on KIRIS was judged in terms of four performance categories: novice, apprentice, proficient, and distinguished.

The plan was to increase gradually the proportion and weighting of performance events and portfolio items so that the assessment would become primarily performance based (Foster, 1999; Kifer, 1994). That plan ran into trouble when two external evaluations of the KIRIS program questioned the scoring reliability and validity of performance events and portfolios (Hambleton et al., 1995; Western Michigan University, 1995). These evaluations sparked a movement toward a more traditional, rather than more performance-based, format (Foster, 1999). During the 1996-98 biennium, performance events and math portfolios were removed from the testing program for further research and development. Also, to provide a measure for comparing Kentucky's progress to that of other states, the nationally normed Comprehensive Test of Basic Skills (CTBS) was administered in grades 3, 6, and 9, although the results were not used for accountability purposes (Office of Education Accountability, 1996, 1997). In addition to de-emphasizing performance-based assessments, an analysis of KIRIS items found that they assessed KERA goals 1 and 2, which focused on basic subject matter knowledge, more effectively than goals 5 and 6, which addressed critical thinking and problem solving (Nitko, 1997).

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*Performance events were structured activities in which students had to demonstrate an ability to use certain concepts or processes to solve one or more problems. These exercises were typically done in small groups, but students were required to answer questions individually in writing when the group task had been completed. Writing portfolios involved student composition, refinement, and compilation of writing pieces from various genres (e.g., personal narrative, fiction) into a portfolio. Math portfolios contained written descriptions of complex problems and their solutions.

To hold schools accountable, assessment results (which accounted for 84 percent of the total accountability index) were combined with noncognitive indicators (i.e., drop-out, attendance, and retention rates, and transition after high school to higher education, work, or the military) to produce an accountability index for each school and district. These results were averaged over a two-year period (biennium), and schools were expected to show specific rates of improvement relative to these indexes each biennium. The goal was for all schools in the state to achieve an accountability index of 100 within 20 years.* For most of the study period, the accountability index was weighted so that writing portfolios comprised 75 to100 percent of the school's writing score, and open-ended response questions counted for 80 to 100 percent in other content areas.

From 1991 to 1998 schools that exceeded their achievement targets (i.e., threshold scores) and moved at least 10 percent of the students from a "novice" rating to a higher performance category received financial rewards, to be spent according to the wishes of certified staff at the school. Schools that failed to meet performance goals were subject to various sanctions. Schools with declining KIRIS accountability indexes over a two-year period received assistance from a specially trained educator (i.e., a Distinguished Educator) in writing an improvement plan and utilizing improvement funds. The legislation required that schools in which the proportion of successful students declined by five percent or more in any biennium be declared "in crisis." In these schools, all certified staff members were to be placed on probation, and a Distinguished Educator was to evaluate all certified staff every six months and recommend their dismissal, retention, or transfer. In addition, students would be allowed to transfer to a successful school.

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*An accountability index of 100 would mean that the school's students, on average, had achieved the "proficient" rating. The maximum index possible was 140.

The 1994 legislature delayed the imposition of the school-in-crisis designation for two years to give teachers more time to implement KERA. During the 1996-98 biennium, nine schools fell into this category; there was only one report of a student requesting a transfer. Some certified staff left voluntarily, but, because the Distinguished Educator program adopted the position that six months was not enough time to identify weaknesses and help teachers improve, none were terminated. By the conclusion of the second six months, the legislature was considering a revision of the assessment and accountability program, so the Kentucky Department of Education decided not to recommend terminations during this period (Kannapel & Coe, in press).

Legislative discussions about revising KIRIS resulted from the well-publicized problems. The state assessment system became a political issue during the gubernatorial campaign of 1995. While one candidate threatened a major overhaul of KERA and the assessment program, the winning candidate—Paul Patton—proposed a more moderate approach. After his election, Governor Patton appointed a task force to study every aspect of KERA and make recommendations to the General Assembly. The 1998 legislature—on advice of the governor's task force—passed House Bill 53, creating the Commonwealth Accountability Testing System (CATS) to replace KIRIS. The CATS continues to assess Kentucky's learning goals and academic expectations, but results cannot be equated to those obtained under KIRIS. CATS administration is spread across grades 4-5, 7-8, and 10-12, with students assessed on different subjects at different grade levels. CATS contains multiple-choice and open-ended response items as well as on-demand writing tasks and a writing portfolio that contains fewer pieces at some grade levels than did the KIRIS portfolio. As part of CATS, the CTBS is administered to students in grades 3, 6, and 9.

The accountability system is also undergoing revision. In the 1998-2000 interim period, sanctions were delayed indefinitely, and

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rewards were given to all schools that had improved their scores during the 1996-98 biennium. State assistance, voluntary during the interim period, was provided by Highly Skilled Educators (the new name given to those formerly designated as Distinguished Educators) in the lowest-performing schools with declining scores. The novice and apprentice performance categories were broken into increments so schools would receive credit in the accountability index for progress within a category—for instance, when students move from "low apprentice" to "high apprentice." This change will have the greatest impact in the novice category, where students scoring "novice" had been assigned an index of zero but now are given credit for making progress even if they do not move into the apprentice category. This "progress credit" will produce higher accountability indices for all schools under the CATS system.

The interim accountability system will be replaced by a new accountability system that addresses a number of issues that attracted criticism with KIRIS. For instance, the reward structure will acknowledge schools that make progress toward their improvement goals even if they fall short. The system takes into account the number of students assessed at each school, so the large year-to-year score fluctuations typical of very small schools (such as Dyersburg, profiled in Part Two of this report) will be less likely to result in an "in-crisis" designation. A scholastic audit, currently under development, will help determine the appropriateness of a school's classification and recommend needed assistance. Parents or guardians of every student will receive a school report card sharing information about student academic and nonacademic achievement; school learning environment; and data on race, gender, and disability. A local newspaper will publish a district summary.

## Restructured Governance System

Kentucky's brand of systemic education reform, like the Smith and O'Day model, required that key decisions about student learning be made at the school level to "ensure true participation of the school faculty in the most important instructional decisions in the school" (Foster, 1999, p. 145). The primary mechanism for accomplishing this was the creation of school-based decision making (SBDM) councils. The statute (KRS 160.345) required all schools (except those in one-

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school districts and those that had met their state-defined goals on the test) to establish SBDM councils by July 1, 1996 (Kentucky Department of Education, 1999). SBDM councils, by statute, consist of the principal, who acts as chair; three teachers, elected by teachers at the school; and two parents, elected by parents of enrolled students.

Kentucky's SBDM councils may increase their membership proportionately. As of 1994 schools with eight percent or more minority students must elect at least one minority member to the council. There is a provision for alternative SBDM council structures, including the option to have someone other than the principal serve as chair.

SBDM councils are responsible for setting school policy consistent with district board policy to provide an environment that enhances student achievement of KERA goals. SBDM councils are responsible for

- determining the frequency of and agenda for meetings
- determining, within the limits of total available funds, the number of persons to be employed in each job classification
- determining which textbooks, instructional materials, and student support services shall be provided in the school (using an appropriation from the local school board)
- hiring a principal when a vacancy occurs based upon a list of applicants submitted by the superintendent and consulting with the principal on filling other staff vacancies
- adopting policies, to be implemented by the principal, concerning curriculum; assignment of staff time; student assignment to classes and programs; school schedule; use of school space; instructional practices; discipline and classroom management; extracurricular programs; and procedures for alignment with state standards, technology utilization, and program appraisal

In addition, within local board policy, SBDM councils may make decisions about the school budget, individual student assessment (above and beyond the state-required assessments), school improvement plans, professional development, and parent participation. Thus, SBDM councils were given broad latitude to set policy and make decisions that affect student learning.

Of the numerous challenges to the SBDM statute since 1990, most relate to the scope of SBDM council versus school board authority

(Kentucky Department of Education, 1999). In addition, there have been several attempts over the years to expand council membership to include more parents, noncertified staff, or students, but these changes have failed to win the support of the state legislature. Thus, the substance of the SBDM statute has remained relatively unchanged over time.

## KERA Primary Program

Perhaps the most significant KERA initiative in terms of the change required of teachers and other stakeholders was replacing grades K-3 with a nongraded primary program (hereafter referred to as the primary program). As pointed out by Fuhrman, Elmore, and Massell (1993), the requirement that schools eliminate grades K-3 was a curious addition to a reform package that had called for locally designed instructional inputs. Yet, nongraded programs emphasize tailoring instruction to individual needs so all students can achieve, which is quite compatible with the systemic education reform movement's goal of helping *all* children achieve rigorous academic standards. Foster explains inclusion of the primary program in the reform package:

> Although not specifically proposing creation of a primary program, Governor [Wallace] Wilkinson contended in his reform proposal prior to the Supreme Court decision that it was time to alter the structure of the school to enable teachers to work more effectively with children who have different learning styles, aptitudes, or interests. Wilkinson contended that the traditional school leaves the educational needs of many children unmet because it is not flexible enough to meet their different learning needs. . . . A classroom in which everyone is studying the same thing at the same time is not one that can easily adapt to individual differences in either learning style or ability. With this as background, David Hornbeck, consultant to the curriculum committee of the Task Force on Education Reform, [recommended that grades K-3 be replaced with an ungraded model] (Foster, 1999, p. 70).

Foster notes that KERA planners had envisioned that the primary philosophy would work its way up through the rest of the elementary grades:

> It was our hope that [the primary program] would be so successful that by the time [students] came out of the primary, we could convince other teachers up through the elementary school, and get the whole elementary school ungraded (personal communication, 9/17/99).

Nevertheless, the link between the KERA primary program component and the larger reform package was not made clear to Kentucky educators. In Hornbeck's final recommendations to the legislative task force, the primary program appeared on page 65 of a 66-page document, was described in three sentences, and was not linked conceptually with the recommendations that preceded it (Hornbeck, 1990). Foster acknowledges that the rationale for the primary program and its link with the larger reform were never made clear:

> We dropped that one in there very late. . . . We had no protocols, no models, we had no documentation, no references to literature, nothing. It just appeared. So it really left the Department of Education to do whatever [it] wanted. I was asked a couple of times to come over and interpret to them what we had in mind. Hornbeck was gone by [then]. I used my own philosophy as to the intent of that. . . . So we got what we deserved on that one. You never want to lay something that significant into a piece of legislation without some sort of supporting documentation that people can use to get at the legislative intent. But there is nothing, there is nothing (personal communication, 9/17/99).

In addition to the lack of clear linkage between the primary program and the rest of KERA, implementation of the primary program was hampered by a time line that required the program to be implemented before state curriculum guides were available. The Kentucky Department of Education set forth seven critical attributes of primary classrooms: developmentally appropriate instructional practices, multiage/multiability classrooms, continuous progress, authentic assessment, qualitative reporting, professional teamwork, and positive parent involvement (Kentucky Department of Education, 1991, 1993a). These critical attributes, which were intended to guide the development and implementation of primary classrooms, differed from directives given teachers at other grade levels by the Kentucky Department of Education.

To assist primary teachers with documenting and reporting student progress, the Kentucky Department of Education designed the Kentucky Early Learning Profile (KELP). The KELP included a variety of documentation to be kept for students in the primary program, including conversations with parents and students; anecdotal records; student performance; learning descriptions; and tools for reporting students' social, emotional, physical, aesthetic, and cognitive progress to parents. The KELP was not mandatory, but schools were required to use an equivalent method for documenting student progress.

## KERA Supplemental Programs

KERA stands out as a systemic education reform in that it contains a number of supplemental programs intended to support the reform in a coherent manner. Cohen (1995) praises Kentucky's supplemental programs by noting that, of states attempting systemic reform, only Kentucky augments demanding state standards with efforts to support at-risk children. Indeed, most of Kentucky's supplemental programs were conceived as tools that schools might use to help students overcome learning barriers that emanate from outside the school. A preschool program was enacted to help at-risk four-year-olds and handicapped three- and four-year-olds get an early start. Schools in which 20 percent or more of the student body qualified for free lunch could apply for state grants to establish family resource centers (in elementary schools) and youth services centers (in middle and high schools) that coordinate or provide services to help students overcome social, emotional, and physical barriers to learning. Funding was provided for extended school services (e.g., extended school day, week, or year) at all schools for students who needed additional time to meet KERA goals. A technology program was instituted to provide access to the latest administrative and instructional technology.

## KERA Funding Increase

Unlike prior attempts at school reform in Kentucky, KERA was supported by significant funding. To implement the reform, the legislature raised the state's sales tax one cent (from five cents to six cents), raised the corporate tax one percent, and made changes to the state income tax code. Schools were guaranteed an 8- to 25-percent increase in state funding in the school year after KERA passed (1990-

1991) and a 5- to 25-percent increase in 1991-92. These increases sent a message that the legislature was serious about the reform and helped fuel initial enthusiasm for the effort.

School funding continued to increase throughout the 1990s. According to a special report to the Kentucky Board of Education (Augenblick, 1999), per-pupil state and local revenue increased by about 73 percent statewide between 1989-90 (the year before KERA was passed) and 1997-98, far surpassing the inflation rate of about 29 percent. Included in the funding increase were allocations to the various state grant programs that helped support the reform effort: extended school services, preschool, family resource/youth services centers, and professional development. The Kentucky Office of Education Accountability reported in 1999 that state and local funding for support programs such as these increased by 457 percent between the 1989-90 and 1998-99 school years.

*Education Week's* "Quality Counts 2000" report (2000) revealed that the change in inflation-adjusted education spending per student from 1988 to 1998 stood at 47 percent for Kentucky, compared to the national average of 13 percent. During those 10 years, Kentucky led the nation in the amount of *increase* in per-pupil spending. In terms of absolute dollars, in 1998, Kentucky spent $6,196 per pupil (ranking 25th nationally) when figures were adjusted for regional cost differences or $5,539 (ranking 20th nationally) without the cost adjustment ("Quality Counts 2000"), up from 41st in the nation in per-pupil spending in 1989-90 (Kentucky Education Association, 1991).

Teacher salaries increased markedly under KERA. Annual reports from the Kentucky Education Association (1991, 1992) and the National Education Association (1993) revealed that the average teacher salary in Kentucky increased from $26,292 in 1989-90, when the state ranked 37th nationally, to $31,487 in 1992-93, for a national rank of 27th. *Education Week* ("Quality Counts 2000") reported that the 1998 average teacher salary (adjusted for cost of living) in Kentucky was $38,842, just under the national average of $39,347, placing Kentucky 18th in the nation.

KERA generated additional funding for school construction with the goal of more equitable distribution of school facilities among school districts (Office of Education Accountability, 1991). An official at the Kentucky Department of Education reported to AEL researchers in 1992 that nearly $300 million per year had been spent on new construction after the passage of KERA, compared to roughly $50 million annually prior to KERA (AEL, 1992).

## Chapter 2

# The AEL KERA Study

## Introduction

### Study Rationale and Purpose

Recognizing that Kentucky's massive effort was unique, AEL set out to document implementation of the reform to provide timely feedback to policymakers on how systemic education reform was playing out on the ground. AEL determined to follow implementation of KERA in rural settings because most Kentucky school districts are rural, AEL had a rural focus, and comprehensive education reform in rural districts had been seldom reported or documented.

The first five years of research (1990-95) documented how local educators had reacted to and implemented KERA. At the conclusion of that phase (which corresponded with the first five years of the implementation and operation of KERA in Kentucky), the research team identified positive outcomes as well as critical issues in need of attention (Kannapel, Aagaard, & Coe, 1997). On the positive side, the reform effort had maintained momentum over time, funding had increased and become more equalized, instructional and curricular change had occurred, parents and teachers reported that students had become better writers and thinkers, family resource and youth services centers had helped overcome barriers to learning, and decision making had devolved to the school level. Problem areas were that the assessment and accountability programs had not been well accepted; educators had struggled to find time for reform; the primary program had not been implemented in accordance with the seven critical attributes established by the state; educators and parents perceived that students had missed out on "basic skills"; and parent involvement, in spite of SBDM councils, had been de-emphasized at the local level over time (AEL, 1996; Kannapel, Aagaard, & Coe, 1997).

Based on these findings, AEL proposed to conduct a second phase of research that would build on the findings about education reform implementation by studying the effects of KERA on curriculum, instruction, and student learning. AEL believed that by 1996, the law had been in place long enough to have produced changes in the classroom. Also, since improved student learning was the ultimate goal of KERA, it was important to document whether this was happening. Finally, interviews with state and local policymakers and educators in the spring of 1996 indicated that their interests had changed from the *implementation* of KERA to the *effects* of KERA.

## Purpose and Phases of the Research

The AEL KERA study was initiated to inform policymakers of local responses to mandated education reform. The study was conducted in several phases (see Table 1). This chapter will describe, in the main, the research design for the 1996-2000 phase of the research. Information on the full 10 years of the study (e.g., Kannapel, Aagaard, & Coe, 1997) is provided occasionally because design decisions made and knowledge gained in the early years influenced later research activities, findings, and conclusions.

The overall research effort began in 1990. A three-month baseline study was conducted in six rural districts using interviews to gauge people's reactions to the KERA legislation. Based on these interviews, four of the six districts were chosen as sites for a longitudinal study. One district declined to continue participation. A fourth district that had not participated in the baseline study was selected so that the longitudinal study would include a district with a minority population. The first phase (1991 to 1995) concentrated on how five key components of KERA were being implemented and, if at all, integrated: the primary program, school-based decision making, family resource/

**Table 1**
**Phases of the Research**

| Study Phase | Nature of Study | Study Sites | Researchers |
|---|---|---|---|
| Fall 1990 | Baseline: reactions to KERA | Six rural Kentucky school districts | Pam Coe<br>Patty Kannapel |
| 1991 - 1995 | Longitudinal study of implementation of various KERA strands and their integration with one another | Twenty schools in four rural districts | Pam Coe<br>Patty Kannapel<br>Lola Aagaard<br>Beverly Moore |
| Spring 1996 | Interim study: reactions to KERA after six years; suggestions for next phase of research | Four rural districts; state-level policymakers | Pam Coe<br>Patty Kannapel<br>Lola Aagaard<br>Pam Coe |
| Fall 1996 - 2000 | Longitudinal study of effects of KERA on curriculum, instruction, and student learning | Six schools in four rural districts | Patty Kannapel<br>Lola Aagaard<br>Cindy Reeves |

youth services centers, instruction and assessment in grades 4 through 12, and funding. By 1995, when AEL was developing a proposal to continue to study the implementation of KERA, state policymakers' interests had shifted from KERA implementation to the effects of KERA. Therefore, the final phase of this study (1996-2000) focused on the changes teachers were making in classrooms and how these changes affected students. The research team remained in the same four districts but, due to resource limitations, narrowed their focus to the classrooms of six elementary schools.

## Rationale for Qualitative Design

AEL's initial proposal for the KERA study, submitted in 1990, called for both quantitative and qualitative components. The quantitative component was intended to provide generalizable, statewide data on reform implementation, which would be supplemented with case studies of selected districts and schools. The qualitative component was included in the proposal because this type of research—which combines observation of important events with interviews of key actors and review of relevant documents—is well suited to studying the effects of complex reform policy in very different local districts (Guba & Lincoln, 1994; Hess, 1995). Only the qualitative component of the study was funded, however. Qualitative inquiry allowed the research team not only to examine how local context influenced reform implementation but to note how various implementation activities at both the state and local levels influenced other implementation activities—a phenomenon Lincoln and Guba (1985, p. 157) call "mutual shaping."

AEL's qualitative study combined elements of an ethnography of schooling (Spindler, 1982) and applied anthropology (van Willigen, 1993). It was ethnographic in that observations were prolonged, repetitive, and contextualized; hypotheses emerged from the data; the local view of reality was considered; and the methodology allowed local knowledge and values to emerge (Spindler & Spindler, 1987). The research constituted applied anthropology in that the data were used not to develop theory but to provide information to inform policy (van Willigen, 1993).

## Research Settings

### Study Districts

With the exception of the initial baseline study, the whole of the longitudinal research was conducted in four small, rural districts containing 20 schools: three county districts—representing the eastern, central, and western parts of the state—and a small, independent district within a rural eastern Kentucky county.* These districts were chosen on the basis of recommendations from various Kentucky stakeholders and policymakers, who were asked to identify "typical" rural Kentucky school districts that were neither at the forefront of reform nor likely to subvert it. From this list, AEL selected six districts for the 1990 baseline study, based upon ease of travel to the districts and the districts' receptiveness to the study (gauged by initial phone calls and/or visits). The six districts included four in eastern Kentucky (closer to AEL's home office in West Virginia), one in central Kentucky, and one in western Kentucky.

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* Kentucky's independent school districts are a throwback to school organization in the early twentieth century, when schooling was offered generally in central towns. When county districts became the norm, many towns opted to retain an "independent" district status rather than be absorbed into the larger county district.

After the baseline study concluded in 1990, AEL chose four districts from the original six for the longitudinal phase of the research. The selections included a district from each of the major geographic regions (west, central, and east) as well as an independent district. The original central Kentucky district elected not to participate in the longitudinal study. The replacement district was not part of the baseline study and was selected to include a district with a significant minority enrollment, unlike the original six districts.

All study districts were promised anonymity and given code names. Table 2 summarizes pertinent information regarding the four districts. Except for the number of schools, descriptive data have been rounded to help preserve anonymity.

## The Six Schools in the Final Phase

The research focus from 1996 through 2000 narrowed to classrooms in six elementary schools in the four districts. The six schools were chosen to highlight as many factors as possible that might influence how their school personnel and communities responded to KERA. These factors included location of school in the district (central or outlying), type of district (county or independent), size of enrollment, percentage of students qualifying for free or reduced-price lunch, and percentage of minority enrollment. Table 3 contains this information for each school.

## Data Collection

### Research Questions

The overarching question that guided the 1996-2000 phase of the study was this: Under what conditions, if any, did KERA change educator behaviors in ways that affected student learning?

## Table 2
## Study District Information

| District Code Name | Location | Number of Schools (1998-99) | Average Daily Attendance (1997-98) | Economic Base | Per-Pupil Property Wealth (1997-98) | Students on Free/ Reduced-Price Lunch (1998-99) |
|---|---|---|---|---|---|---|
| "Lamont County" | Western Kentucky | 5 | 1,500 | Agriculture, Service | $203,000 | 40% |
| "Newtown Independent" | Eastern Kentucky | 2 | 750 | Retail, Service | $259,000 | 35% |
| "Orange County" | Eastern Kentucky | 8 | 3,500 | Service, Public Assistance | $131,000 | 70% |
| "Vanderbilt County" | Central Kentucky | 4 | 1,600 | Agriculture, Service, Commuter | $193,000 | 45% |

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## Table 3
## Study School Information (Rounded for Anonymity)

| District Code Name | Location of School | School Code Name (Abbreviation) | Grades Served | Enrollment (1998 99) | Percentage on Free/ Reduced-Price Lunch (1998-99) | Percentage of Minority Enrollment (1998-99) |
|---|---|---|---|---|---|---|
| "Lamont County" | Western Kentucky, small town | "Kessinger Elementary" (KES) | K-5 | 350 | 50% | < 1% |
| "Lamont County" | Western Kentucky, outlying | "Riviera Elementary" (RES) | K-5 | 100 | 60% | 3% |
| "Newtown Independent" | Eastern Kentucky, small town | "Newtown Elementary" (NES) | K-6 | 400 | 50% | < 1% |
| "Orange County" | Eastern Kentucky, small town | "Orange County Elementary" (OCES) | K-6 | 400 | 70% | < 1% |
| "Vanderbilt County" | Central Kentucky, outlying | "Dyersburg Elementary" (DES) | K-8 | 100 | 40% | 2% |
| "Vanderbilt County" | Central Kentucky, small town | "Vanderbilt County Elementary" (VCES) | K-6 | 500 | 60% | 25% |

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This question focused not only on teacher behavior and its effects on student learning but on the conditions that enabled or prevented the intended changes from occurring. Specific subquestions addressed areas in which KERA was designed to bring about change: curriculum, instructional practices, assessment, parent involvement, decision making, challenging all students, and student learning. To help guide the researchers' interviews and observations, the researchers developed a set of "analytical" questions midway through the 1996-2000 phase of research. Appendix C contains the full text of these research questions. (Appendix D lists the research questions for the 1991-95 phase.)

This report focuses on the research questions that relate to key components of Smith and O'Day's (1991) theory of systemic reform: challenging goals for all students, coherent system of instructional guidance, and restructured governance system. In addition, though Kentucky's primary program is not a part of Smith and O'Day's model of systemic reform, this report also shares data on the primary program because it was a key component of KERA. Taken together, these components are at the heart of Kentucky's intended reform objectives: changed classrooms that lead to high levels of learning for *all* students. This report, therefore, examines the extent and conditions under which schools studied

- helped *all* students achieve KERA goals
- implemented curriculum, instruction, and classroom assessment practices consistent with reform goals
- made key decisions about how to improve student learning
- implemented the primary program in ways that contributed to reform goals

## Methodology

To answer the questions stated above, the researchers interviewed key players, observed important activities and events, and reviewed relevant documents. In addition, the research team followed the students of the class of 2006 in the six schools throughout the study period. This group was chosen because it was to complete the primary program in 1996-97, and the researchers were familiar with the students' earlier primary experience from the first phase of research. In addition, the researchers could observe the students' final year in the primary program as well as their transition to the intermediate grades. Following these students through their fourth- and fifth-grade years provided an opportunity to examine the influence, if any, of KIRIS on classroom instruction.

The majority of data were collected during school years 1996-97, 1997-98, and 1998-99 as the class of 2006 moved through the third, fourth, and fifth grades. Aagaard, Kannapel, and Reeves were each assigned primary responsibility for two of the elementary schools studied. Coe provided fieldwork assistance and consultation as needed. In 1996-97 and 1997-98 the researchers visited each school on four occasions per year for several days at a time to observe classrooms and conduct interviews; during a fifth visit near the end of the school year, they shared preliminary findings from that year with local educators and parents and obtained feedback. In 1998-99 the researchers visited each school in the fall and again in the spring; they reduced the number of visits because they had developed a satisfactory understanding of the pattern of instruction at each school, enabling them to reduce the fieldwork and spend more time summarizing and analyzing classroom observation and interview data. In the fall of 1999 the researchers held briefings with administrators and teachers in each district to receive feedback on preliminary findings of the 1996-2000 phase of research to ensure accuracy and solicit alternative interpretations of the researcher's explanations.

Details regarding interview, observation, and document review methodology follow. Appendix E provides more specific details and a summary of the data collection for each district during the 1996-2000 phase; Appendix F shows data collection for the earlier phases.

## Interviews

Data on all four research questions were obtained from more than 400 interviews with about 140 people, including the principals at each of the six schools, teachers of the class of 2006, randomly selected students in the class of 2006 and their parents, and selected community members. Principals, teachers, selected parents, and students were interviewed multiple times over the course of the study. Roughly 60 percent of the interviews were with educators, while 40 percent comprised students, parents, and community members. All individuals were asked questions to gauge their perceptions of student learning; curricular, instructional, and state assessment practices; decision-making processes at the school; and the influence of KERA supplemental programs. The interviews were audiotaped with the permission of the respondents, and notes were taken on laptop computers. Some sections of the audiotapes were fully transcribed to ensure accurate representation of issues, perceptions, opinions, and suggestions.

Common interview protocols were developed based on the research questions. The researchers altered the protocols somewhat each year to explore issues or activities unique to that school year (such as asking about writing portfolios during the fourth-grade year, when they were required). In 1998-99 a new set of questions uncovered attitudes of the various role groups about the purposes and processes of schooling. This helped researchers understand some of the factors influencing local implementation of the reform. (Appendix G contains the interview protocols for each year of the 1996-2000 phase of research.)

Interview protocols for educators were lengthy. Because principals and teachers were typically interviewed each time the researchers visited the schools, the protocols were completed in multiple interviews over the course of the school year rather than in one sitting. Lacking the time or resources to interview each student in the class of 2006, the researchers used random selection (stratified by gender, minority membership, and special education status) to choose two target students within each classroom at the end of the 1996-97 school year. The 30 students chosen consisted of 15 males and 15 females, including 3 ethnic minorities and 5 special education students. (Most schools identified students eligible for the gifted and talented programs in fourth grade, thus, this information was not available when selecting students at the end of the third-grade year. However, seven of the target students were identified for gifted and talented programs in fourth grade.) One mother requested that her child be dropped from the study. The remaining 29 students and their parents or guardians were interviewed two or three times during the study. Additionally, the researchers focused on the target students during subsequent classroom observations, recording their reactions and school experiences. (Appendix H offers demographic information about the target students at each school; Appendix I contains descriptive information about the parents of the target students.)

At the beginning of the 1998-99 school year, central office administrators, school principals, and current teachers of the class of 2006 recommended names of community leaders to interview to learn how local culture and attitudes influenced schooling in each of the districts. From these recommendations, researchers interviewed between 3 and 7 community representatives in each district, conducting a total of 18 community interviews across the four districts. Those interviewed included mayors, district judges, other political officials, ministers, local business owners, bankers, parents who were active on school-based decision making councils, and others. (Appendix J provides demographic information about the community members interviewed.)

In addition to individual interviews, focus groups were conducted with teachers and administrators in 1997-98 and 1998-99 to explore some of the issues that emerged during individual interviews. In 1997-98 the focus groups were part of the end-of-year briefing on research findings and were conducted separately with administrators and fourth-grade teachers. In 1998-99 the focus groups were conducted with teachers who had taught the class of 2006 in grades 3 through 5.

## Observations

Researchers conducted more than 300 hours of classroom observations of the class of 2006 in 1996-97 (third grade), 1997-98 (fourth grade), and 1998-99 (fifth grade). Rather than use a formal observation checklist, team members decided in advance the type of information to be gained from observation, based on the research questions. This type of specification prior to fieldwork reduced the chances of gathering noncomparable data (Goetz & LeCompte, 1984). The kinds of information included descriptions of the following:

- the physical classroom, including seating arrangement and wall displays, which helped illustrate the level of interactivity and the focus of curriculum and instruction
- subjects taught
- instructional approaches and materials used, including kinds of teacher questioning and assignments given

- classroom assessment strategies, both formal and informal
- student engagement with instruction
- student proficiency in responding to teacher queries

Following classroom observations, the research team reviewed and coded for anonymity the field notes taken on laptop computers to ensure accuracy and relevancy of information. Selected field notes were circulated among the research team periodically to ensure comparability and to enable the team to make any needed adjustments to procedures for observing and recording information.

### Document Review

Each school year, the team identified relevant documents to collect during site visits. Throughout the decade of fieldwork, researchers subscribed to and read local newspapers from the study districts to get a sense of the local culture and to stay abreast of local district activities. Relevant articles were entered into the database. From 1996 to 1999 the researchers copied all of the daily lesson plans of the teachers of the class of 2006 to provide information on what and how teachers taught throughout the school year. Trained support staff analyzed the lesson plans for information on subjects taught, time devoted to each subject, and instructional approaches.

Test score data provided evidence of student learning for the class of 2006 over time as a whole as well as among the 29 target students. Also, researchers obtained copies of report cards and fourth-grade writing portfolios for the target students. Other collected documents included school transformation plans, which contained information on the school's instructional focus, and SBDM council minutes, which provided information on the schools' decision-making processes.

## Data Analysis

A qualitative data analysis software program (NUD*IST) expedited portions of the data analysis. The team received many hours of training in the program and devised a coding scheme to correspond with the research questions. Field notes from 1996 to 1999 were coded and entered into the database by the research team, administrative assistants, and NUD*IST training consultants under a contract with AEL. Coding reliability checks were conducted by the research team and by the training consultants. The NUD*IST program enabled the research team to extract for analysis field note excerpts on specific research notes.

Data analysis was ongoing throughout the study. After each visit to the study schools, the research team discussed via e-mail the highlights of observations and interviews and made decisions about future data collection. Formal data analysis occurred near the end of each school year. Each researcher extracted relevant data from the NUD*IST database to compose a set of findings or write case studies of the schools visited during the year, then circulated these to the rest of the research team. These findings and/or case studies were organized around the research questions. The team then met to compare findings from individual schools, identify local context factors influencing reform activities, and generate a set of general findings across schools. These "within-case" and "cross-case" analyses helped examine particularities at each study site while identifying generic processes at work across cases (Huberman & Miles, 1994). The research team shared preliminary findings with local educators during end-of-year "briefings" and with local school boards at one of their regular monthly meetings. This feedback contributed to refinement of the analysis by enabling the team to check the accuracy of factual information and gain insight into local educators' attitudes and behavior.

In the summer of 1999 each researcher analyzed data and wrote case studies for her assigned study schools, drawing on data from 1991 through 1999 as appropriate. Case study outlines corresponded to the research questions. Data on each research question were extracted from the NUD*IST database, where possible, and by analyzing lesson plans, test scores, student portfolios, and other relevant documents.

Researchers circulated case studies of all six schools amongst themselves. After each had read all six case studies, the team members generated a set of findings under each research question and presented these to two groups of state-level policymakers and local educators in the study districts in the fall of 1999. The resulting feedback helped the team identify the issues most important to policymakers and practitioners, as well as issues in need of further analysis.

## Ensuring Credibility

Several data collection and analysis techniques helped ensure the credibility of the research findings, including prolonged engagement, persistent observation, triangulation, negative case analysis, peer debriefing, and member checks (Lincoln & Guba, 1985, p. 301).

Prolonged engagement refers to the researchers' long-term presence in these districts, which enabled them to develop trusting relationships with respondents, interview the same people over time, and go beyond the gathering of exploratory data to probe issues in greater depth. As trust and camaraderie developed, the researchers noted that local informants were more willing to talk freely about sensitive issues that influenced reform in their districts and schools. Following the class of 2006 for three years allowed students and teachers to become accustomed to the researchers' presence in their classrooms and reduced the risk of "observer effects" (Goetz & LeCompte, 1984)—for instance, students behaving or misbehaving in class solely because an outsider was present.

Persistent observation in the same classrooms over a period of time provided depth, focus, and salience to the inquiry (Lincoln & Guba, 1985). As the researchers followed the class of 2006 through different grade levels, they began to identify common patterns across schools. For instance, as team members observed instruction in classrooms, they were struck with the similarity to Elmore's (1996) description of the core pattern of instruction—traditional features of schooling (e.g., age/ability grouping, teacher-directed instruction, rote learning) that have resisted change for generations. Subsequently, the team gathered more specific data on the core pattern, both in observations and interviews.

The variety of data sources and collection methods allowed triangulation of information for validation purposes in two different ways (Goetz & LeCompte, 1984). Information on the same topic was collected through multiple methods (interviews, observation, documents) as well as from multiple sources via a single method (several different interview respondents) (Lincoln & Guba, 1985; Huberman & Miles, 1994). For instance, to gather information on different instructional practices, the researchers asked individual teachers to describe their approaches for each subject, observed them in the classroom, and examined their lesson plans. The team also interviewed students and their parents about the teachers' instructional approaches. Another form of triangulation is convergence among researchers: two researchers observing the same activity or participating in the same interview agree on what they saw or heard (Huberman & Miles, 1994). The team incorporated this form of triangulation by visiting schools periodically as two-member teams and sharing field notes.

While analyzing data and formulating findings, the research team noted exceptions to the emerging patterns—the "negative cases" (Lincoln & Guba, 1985, p. 309; Goetz & LeCompte, 1984, p. 175). Analyzing differences among classrooms, communities, or schools helped the team limit general findings to particular circumstances and consider how context was influencing reform implementation.

The research team met annually with an external peer review panel for debriefing, described by Lincoln and Guba (1985) as an interaction between a researcher and experienced and informed colleagues who ask searching questions regarding the researcher's biases, working hypotheses, and study design. During the 1996-2000 phase, the panel members were G. Alfred Hess (originally with the Chicago Panel on School Policy, later with Northwestern University), Susan Fuhrman (Consortium for Policy Research in Education, University of Pennsylvania), Andrew Porter (University of Wisconsin, Madison), and Craig Howley (AEL and Ohio University). Before each meeting, the panel received a packet of materials that included any publications produced since the last meeting, research findings for that year, and the tentative design for the following year. Full-day peer review meetings allowed time for questions and discussion. Following each meeting, the research team met and developed responses to the peer review panel's suggestions.

Research team member checks add credibility by testing each researcher's findings, interpretations, and conclusions with the participants who provided the data (Lincoln & Guba, 1985). During interviews, researchers would revisit previously gathered information as a check on current attitudes, using prompts such as, "Last year, I remember teachers said they felt a lot of pressure from the writing portfolio requirements. How is it this year?" This allowed respondents to confirm or disconfirm previous information as well as add new data about the present situation. Similarly, the researchers asked respondents to comment on tentative research findings to determine if the findings accurately represented respondent views, perceptions, and concerns.

Additionally, formal briefings were held annually with various role groups (e.g., classified staff, teachers, administrators, board members, parents) to present research findings for the year and obtain their feedback regarding the accuracy of the findings as well as their explanations for the findings. At least two research team members were present at most briefings—one to conduct the briefing and one to take notes. Finally, early drafts of research reports were circulated to various district contacts and school personnel for comments and clarification. Entire drafts or particular portions of reports were also sent to informants who had been quoted in the text. This allowed participants to correct any misstatements of fact or misinterpretations.

## Transferability of Findings

An important concern associated with single-site case studies is the extent to which the findings generalize. Multisite studies such as this one help deal with this problem (Firestone & Herriott, 1984). Whether the findings hold true in other contexts depends on how similar those contexts are to the ones described in this report (Lincoln & Guba, 1985). The fact that many of the findings in this report hold true across multiple sites with varied contexts, as illustrated in Part Two, may be evidence that the findings will hold up to even wider transferability. In any case, every attempt is made to provide enough description to allow readers to make their own decisions about transferability.

# Part Two

## Elementary School Reform

### Introduction

This section of the report shares research findings on the effect of KERA on curriculum, instruction, and student learning in the six elementary schools studied. The case studies are followed by cross-case analyses, which summarize common findings across all study schools, with frequent connections to state-level data. In addition, the cross-case analysis identifies state and local conditions that facilitated or hindered reform implementation at the various study schools.

Most of the salient issues can be brought to light by describing a few contrasting sites; therefore, only three of the six study schools are profiled to keep the report of manageable length. Orange County Elementary School (OCES, eastern Kentucky) and Kessinger Elementary School (KES, western Kentucky) were selected because both schools made good-faith efforts to implement reform, yet the local cultures and influences led to vastly different results. Conversely, Dyersburg Elementary School (DES, central Kentucky) was one of the two study schools that felt no need for the reform. Before beginning the case studies, however, a brief description of the three schools not profiled gives the reader a sense of the full range of conditions, to aid in understanding the cross-case findings that conclude Part Two.

### The Three Additional AEL Study Schools

#### Riviera Elementary School

Located about 10 miles from Kessinger* in Lamont County, the western Kentucky town of Riviera is home to about 550 people, and its small school serves about 100 students in grades K-5. The school building is an old brick structure that formerly housed Riviera High School. The district facilities plan calls for closing Riviera, but the school board has yet to put the issue on the table. The proportion of students qualifying for free or reduced-price lunch increased from 32 percent in 1991-92 to 62 percent in 1998-99; Riviera teachers attribute this increase to a recent proliferation of low-rent mobile homes that attract poor, transient families.

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*Names of people and places have been changed to protect anonymity.

Riviera Elementary School (RES) is led by a head teacher who performs administrative duties for a half day and teaches the other half. Typical of Lamont County, where administrative salaries are low, the school has had four head teachers since this study began. Leadership has been stable since the 1997-98 hiring of Karen Vickers, who lives only a few doors from the school. The five classroom teachers at RES are relatively traditional in their philosophies and approaches. The four primary teachers have been somewhat open to innovation and to KERA, however, which has caused a rift with the two more traditional intermediate teachers.

RES students have not performed as well as other Lamont County schools on the KIRIS assessments, although their scores have improved. The school began with a KIRIS baseline accountability index in the mid 30s in 1992 (the top accountability index possible is 140), improved to the upper 30s in 1994, remained about that level in 1996, then rose to the low 40s in 1998. The school's 1999 CATS accountability index was in the upper 50s, the lowest in Lamont County and the second lowest among the six AEL study schools. The Kentucky Department of Education has not explained how the KIRIS and CATS accountability indexes are related. Scores on the nationally normed Comprehensive Test of Basic Skills (CTBS), which is not aligned with KERA goals, rose dramatically from a national percentile in the low 20s in 1997 to about 50 in 1998, rising again to the mid 50s in 1999. (The third-grade class that scored so low on the CTBS in 1997 was very small and included several students with learning disabilities or mental handicaps.)

## Newtown Elementary

Located in an eastern Kentucky county seat, Newtown is home to about 5,000 people and boasts an independent school district that prides itself on sending more than 90 percent of its high school graduates to college. Newtown Elementary School (NES), the only elementary school in the district, serves about 400 students in grades K-6 and is filled to capacity. Traditionally, NES has been considered the "elite" elementary school in the region; many people in the surrounding county think of it as a school for rich people's children. Because of economic changes in the town, however, the socioeconomic status of the student body has declined over the past decade, and the proportion of students qualifying for free or reduced-price lunch at NES has risen from about 30 percent to about 50 percent.

NES has had two principals since this study began in 1990, both Newtown natives employed in the district for many years. Many of the faculty had lengthy experience at the school and have had success with traditional methods (such as drill and practice). The school ranked in the top 10 to 30 percent of elementary schools in pre-KERA statewide testing. Reflecting the mood of the district in general, most educators at NES were cautious about implementing many of the changes called for in KERA; NES was one of two schools studied that changed the least. Even so, scores on three different measures of student achievement have been relatively high. KIRIS scores rose from a baseline accountability index in the low 30s to an index of nearly 60; and the school's 1999 CATS accountability index was nearly 70, the second highest among the six schools studied. National percentile scores on the CTBS rose from the high 60s in 1997 to the mid 70s in 1999.

## Vanderbilt County Elementary School

Vanderbilt County Elementary School (VCES) is located in the Vanderbilt County seat of Rockview, home to about 3,000 people in the heart of central Kentucky. The school serves about 500 students in grades K-6 and sends its junior high students across the parking lot to the high school building. The school was built in the mid 1970s on the open school model, but walls and dividers have since been erected throughout the building. About 25 percent of VCES students are African American. The percentage of students qualifying for free or reduced-price lunch has held steady at about 55 to 60 percent since 1996.

The school reportedly was traditional in orientation prior to KERA. Teachers reported that the principal resigned the year after KERA passed because he did not want to implement the reform. The SBDM council hired a more progressive leader from outside the district, Ophelia Johnson, who has been principal ever since. Johnson aggressively sought resources and professional development to implement KERA. Teachers appreciated her efforts initially, but soon found the radical changes she required and her leadership style difficult. There was a great deal of tension among faculty members as they struggled to balance the traditional approaches and mind-set of the veteran teachers with the more progressive style of Ms. Johnson and some of the newer teachers.

Test scores generally improved over time, although there has been fluctuation. VCES set a KIRIS baseline accountability index of about 35, which rose to about 40 in 1994 and more substantially to about 50 in 1996 but declined to about 45 in 1998. The school's 1999 CATS accountability index of about 53 was second lowest among Vanderbilt County's elementary schools and the lowest of the six schools studied. National percentile scores on the CTBS fluctuated between 1997 and 1998 but were generally low: about the 35th percentile in 1997, about the 45th percentile in 1998, and about the 35th percentile in 1999 for third graders; scores were in the high 30th percentile and low 40th percentile for sixth graders during the same period. These scores were among the lowest in the AEL study and far below the 1999 state average of the 52nd percentile for third grade and the 50th percentile for sixth grade.

## The Research Questions Revisited

The case studies in the three following chapters describe each school, its support structure, and reform implementation and effects—organized around the four research questions listed in Chapter 2, which reflect the key components of systemic reform as defined by Smith and O'Day (1991):

To what extent and under what conditions did the schools studied

- help *all* students achieve KERA goals?
- implement curriculum, instruction, and classroom assessment practices consistent with reform goals?
- make key decisions about how to improve student learning?
- implement the primary program in ways that contributed to reform goals?

## CHAPTER 3

# Orange County Elementary School

## The Context

### The Community

Located in eastern Kentucky, the Orange County* economy was once based primarily on coal mining, and some residents still commute to other eastern Kentucky counties to participate in the mining industry; however, all but a few small local mines have closed. Currently, the economy relies on a few very small industries, the school system, two area hospitals, and jobs in the county seat. Small communities within the county range from a steadily shrinking coal mining community to isolated communities engaged in small-scale farming. Welfare rolls are high. In 1990 the per capita income for the county was about $8,500 (versus $11,153 for the state), 29 percent of the population lived below the poverty level (versus 19 percent for the state), and about 49 percent of the population over the age of 16 was in the labor force (versus 60.5 percent for the state).

### The District

Orange County contains two of Kentucky's 176 school districts: one county district and one independent district, the latter of which draws most of its students from the county seat. Because the county seat is a market town for the area, the independent district has a richer economic base than the county district. The Orange County school district is much larger and poorer than the independent district it encircles. The district serves about 3,800 students in six elementary schools, one middle school, one high school, and an alternative school.

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*Names of people and places have been changed to protect anonymity.

Appalachia is widely stereotyped as a poverty-stricken area in which local politicians exert undue power through nepotism, patronage, graft, and other forms of corruption (DeYoung, 1991; Precourt, 1983). Ordinary citizens are viewed as having few options, and it is commonly believed that they do not value formal education (DeYoung, 1995). Nepotism, cronyism, and patronage in Kentucky's mountain school districts were in the headlines during the development of KERA (Geiger, 1990; Kaukas, 1989), and much of the governance portion of the law was aimed at eliminating these practices.

In 1990 central office administrators in Orange County explained that the days of the once rampant political infighting were over. The turning point, they reported, was when the district received technical assistance from the state in the 1980s as the result of a request from the district superintendent, who wanted help with a budget shortfall inherited from his predecessor. Since that time, Orange County educators have worked hard to change the district's image, although some political factionalism still exists.

Despite limited resources, the county district instituted some "KERA-like" reforms (e.g., cooperative learning, computer-assisted instruction, and elimination of academic tracking) prior to the law's passage in an attempt to improve student performance as well as the district's image. Many Orange County educators perceived KERA as a unique opportunity to obtain additional funding and resources to continue on their path toward reform of education. From the beginning of the study, Orange County administrators understood that the central goal of KERA was to improve learning for all students. District personnel used the various KERA components to advance their mission of upgrading the education and, consequently, the futures of their students.

The school board raised local taxes substantially to take advantage of the new funding formula under KERA. Because Orange County was a poor district (property value per pupil was assessed at about $60,000 and 65 percent of students were on free or reduced-price lunch the year before KERA passed), it stood to gain considerably from a major influx of state funds coupled with the local tax increase. Between 1989 and 1998 Orange County increased state and local revenue per pupil from about $2,500—the lowest among the AEL study districts—to more than $5,000 per pupil—the highest in the study. In addition, the average teacher salary increased from the lowest in the study (around $24,400 in 1989-90) to the highest (about $34,000 in 1997-98) (Office of Education Accountability, 1999).

New funding allowed the district not only to offer (for the first time) slightly higher teacher salaries than the independent district but to invest in new materials and technology. In addition, Orange County spent considerably more for professional development than the state had earmarked for that purpose. Every teacher and administrator had multiple opportunities for intensive training, and many teachers and administrators became qualified to train others.

Orange County had the largest and most stable central office staff of any of the study districts. The superintendent changed only once during the decade of research, and several other personnel were there for most or all of the 1990s. District administrators encouraged school administrators and teachers to take advantage of the opportunities available to them through KERA, with the possible exception of school-based decision making (SBDM). (Orange County Elementary School was the first—and for years, the only—school in the district to form a council at the outset of KERA, when SBDM was still optional.) The central office assigned staff liaisons to each school in the district to visit and identify the needs of each school. A district math/science specialist consulted with teachers and conducted hands-on projects with students, enriching and supplementing the classroom teachers' programs. Another staff member was responsible for composing and editing a monthly newspaper of school events. Staff were responsive to the needs of teachers. For instance, one staff person synthesized the three curriculum publications produced by the state (Kentucky Department of Education, 1993b; 1996; 1998) into one document, making it easier for teachers to plan instruction.

The school board insisted that all district schools have equal treatment and sometimes gave directives to schools regarding curriculum and instruction, such as a districtwide mandate to use the state-designed Kentucky Early Learning Profile (KELP) as the primary program assessment tool. Districtwide, any student interested in being on the academic team could participate—there was no qualifying test. The Orange County teams won regional and state competitions regularly. When other coaches would ask what qualifications Orange County schools used to pick academic team members, Orange County coaches would joke, "They have to be breathing." Similarly, a districtwide mandate ensured that all interested students could participate on athletic teams. Not everyone could be on the "A" team, but everyone could play in games at their own skill levels.

Whereas most districts relied heavily on the *Core Content for Assessment*, the Orange County central administration developed a document that combined information from all three curriculum guides: the *Core Content for Assessment*, the curriculum framework *Transformations*, and the *Program of Studies*. The advantage of combining the three documents was that *Transformations* and the *Program of Studies* include a focus on goals 5 and 6, which emphasize critical thinking, problem solving, skill application, and subject integration. In addition, *Transformations* provides suggested activities and strategies.

## The School

Orange County Elementary School (OCES) is the most "urban" of the six elementary schools in Orange County by virtue of being located on the edge of the county seat. The school draws some students from the county seat as well as from several smaller communities. About 70 percent of OCES students qualify for free or reduced price lunch. The school building is relatively new (built post-KERA) and has features specifically requested by the principal and staff, such as three extra-large classrooms suitable for housing multigrade classes and their teacher teams. A committee consisting of the principal and selected teachers worked closely with the architects to develop the building plan.

Leadership at OCES was stable throughout the 1990s under principal Peg Hamill, hired in 1989. An Orange County native, Hamill had been an educator in the district for many years, first as a kindergarten teacher, later as an assistant principal, and then as principal of an outlying rural elementary school. Her management style was assertive and enthusiastic, and she earned a reputation for being innovative and energetic. At OCES, she inherited a generally forward-looking teaching staff. Even those not enthusiastic about classroom innovation came to respect Hamill because of her commitment to the students and her willingness to devote extra time and effort to helping students succeed. Over the years, a strong bond developed between Hamill and the OCES teachers.

Hamill, with the help of instructional assistants, performed afternoon bus duty to free teachers for planning. She also was an enthusiastic supporter of the district policy that encouraged (and assisted) teachers to become trainers in such areas as cooperative learning or use of math manipulatives. OCES teachers said that if they wanted specialized training, Hamill made sure they got it, even if she had to find the money outside the usual professional development budget. A number of OCES teachers qualified as trainers of trainers, providing professional development to teachers in their own school as well as those in other Orange County schools and nearby districts. The training-of-trainers model worked especially well at OCES because instruction was organized to facilitate teamwork, as described later.

Hamill was more accessible to students than were principals in the other study schools. From the beginning of her tenure, she spent time in the hallways chatting with students, giving and receiving hugs, and she waved at students as the buses left each day. She worked in the cafeteria during lunch bussing tables and helping the kitchen staff serve food, including second helpings. When asked to identify their favorite adult in the school, nearly all the OCES target students in the class of 2006 identified Ms. Hamill. (The principal was never mentioned in response to this question at the other study schools.)

Kim Newkirk, the school counselor, was also an important leader and support person at OCES. She came to the school at the same time as Hamill, and the two worked as a team. Newkirk took the lead in analyzing test scores of each OCES student and identifying areas of strength and weakness. She also kept in close contact with students through a "counseling" class that was one of the weekly "specials" that all students attended, along with art, music, physical education, and the library. Newkirk's support helped divide the many administrative responsibilities between the two leaders with a common philosophy and approach.

# Implementation and Effects of Reform at OCES: Helping *All* Students Achieve

## Student Achievement and Parent Satisfaction

**Assessment scores.** OCES educators readily adopted the KERA philosophy that all children can learn, and they promoted high achievement for all students. Determining the success of those efforts is difficult, given the changing nature of the state assessments (i.e., more or less performance based), the grades at which the assessments were administered, and so forth. KIRIS accountability indexes indicated great gains for OCES students, and parent satisfaction with student learning has been high. Scores on the only nationally normed test available, the CTBS, were mostly flat or fluctuating, although consistently above the national and state averages.

Regarding KIRIS scores, however, OCES improved its performance dramatically. OCES began with a baseline KIRIS accountability index in the high 30s out of a possible score of 140. (This score, the second highest in the district, was typical of Kentucky elementary schools' baseline scores.) This accountability index included relatively high scores from eighth-grade students who were later moved to a new middle school; the fourth-grade accountability index was in the high 20s. The school's accountability index (based on fourth grade alone) rose to the mid 50s by 1994, improved to the high 50s by 1996, and increased into the low 60s by 1998. Among the schools studied, OCES moved the largest percentage of students from the novice category to higher levels, indicating that attention was given to low-performing students. OCES earned the highest level of rewards for all three KIRIS two-year accountability cycles, one of only 38 schools to do so statewide (David, 1999). In 1999, the OCES CATS score of just more than 70 outperformed every other elementary school in Orange County by at least 10 points. This was also the highest among the six schools studied. Three CATS scores ranged from about 53 to about 70 (OCES).*

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*As noted in Part One, indexes for all schools increased under CATS because of credit given for moving students to a higher level within each performance category. Under KIRIS, progress had been recognized only when students moved into the next performance category (for instance, from "novice" to "apprentice").

In contrast, OCES showed virtually no improvement on the CTBS, which has been administered since 1997. OCES's national percentile scores in the tested subjects of reading, language, and mathematics on the CTBS fluctuated between percentiles in the low 50s and mid 60s between 1997 and 1999. Total battery national percentiles on the CTBS remained stable in the low 60s for both third- and sixth-grade students between 1997 and 1999, well above the 1999 state averages of 52 (third grade) and 50 (sixth grade). CTBS percentile scores at OCES were below those of the two most traditional schools in the study, DES and NES, where national percentiles on the CTBS fell into the high 60s and low to mid 70s respectively. These test data will be discussed in greater depth in Chapter 6.

**Parent satisfaction.** Data on parent perceptions provide another perspective on student learning at OCES. The parents of six randomly selected students interviewed in 1997-98 and again in 1998-99 were very positive about their children's experiences at OCES. Some had reservations about the large multigrade classrooms, but none were dissatisfied with the education OCES was providing. The general perception was that their children's schoolwork was more advanced than pre-KERA and that OCES pushed students to work at the highest level possible. Two of the six families reported choosing OCES over a nearby independent elementary school because they believed it was better for their children. Parents' highest accolades went to school personnel, citing how hard they worked and how much they cared for the students:

> **Parent 1**: [The] teachers . . . are exceptional. . . . They put an effort forth that I've not seen in other schools.
>
> **Parent 2**: They work with [my son] real well over there [at OCES]. They give him a lot of attention, they've always been real good with him. He had [one teacher] for three or four years, and I don't know what he would have done without her. He wrote backwards and was left-handed, and I thought surely he'd wind up in special ed. But [the teacher] worked with him, and he loved her to death. . . . Ms. Hamill acts like she cares about everything. . . . [She's] involved with the kids. She acts like she cares—it's not just a job.

**Parent 3**: When I'm over there, I see things that fascinate me—the teachers honestly love their students.

## Beliefs and Behaviors Concerning Student Capabilities

The OCES faculty appeared to have dedicated itself to the mission of proving that their students could achieve at high levels. Some OCES educators spoke of a desire to help students rise above the Appalachian stereotype. Principal Hamill was instrumental in promoting this philosophy. Like most of the OCES faculty, Hamill is from the mountains herself. The daughter of a coal miner, she was the first member of her family to attend college. She described how her own background influenced her as an educator:

> Nobody ever told me that I might be bright or smart when I was in school, at least not until I was in high school. Then one teacher encouraged me and made me feel that I could be successful. When I graduated, I *swore* that, if I ever had the chance, I would encourage other children the way she encouraged me.

Hamill identified closely with the OCES student body, particularly the many students from low-income households. She actively searched for programs and strategies to help all students achieve. Hamill's endless enthusiasm and energy for this mission, and the support she and counselor Newkirk gave teachers in fulfilling the mission, led nearly all OCES teachers to strive for high achievement for every student in the school. Fourth-grade teacher Jan Vessels commented in 1998:

> Our motto here is that all children can learn, but you have to use a variety of teaching styles. . . . All can learn, but you have to find what the child can do and praise them for it. All can learn, maybe at different speeds and rates, or with a partner, in a different style. You have to accommodate the needs of the child.

The willingness of OCES teachers to believe in the abilities of all students and to work hard to help them progress were critical features of reform implementation. Teachers understood the KERA goals and used all the tools at their disposal to promote high achievement for each and every student. Hamill's leadership was instrumental in making high expectations for students a schoolwide ethic. Not only did she model the belief, making sure teachers noticed when particular children performed at higher levels than expected, but she provided them with professional development and moral support to make the belief a reality. Moreover, she was willing to make tough decisions when teachers did not buy into the philosophy, as illustrated when she did not rehire a teacher who had been on staff for three years because the teacher had not adopted the school philosophy.

Hamill held teachers accountable for moving students toward higher achievement; OCES teachers reported that she was highly supportive of teachers but expected them to perform. When asked how they decided what instructional approaches to use in their classrooms, fifth-grade teacher Jackie Varney responded, "In this school we have the freedom to choose what we do, but we are held accountable." One way Hamill held teachers accountable was by reviewing each student's report card then meeting with teachers to discuss specific student performance. During a group interview, fifth-grade teachers shared specifics on this approach:

> **Anna Newman**: This blew my mind! . . . She sees every child's grades in the school.
>
> **Zelda Quinn**: And she will question you on them.
>
> **Jackie Varney**: You go down to her office two days later, and you see them laying on her desk, and she's got a highlighter pen (marking particular students). Then she discusses student progress with the teacher. It might be a student whose grades have shown improvement or one with a decreased grade average.

In keeping with the goal of helping *all* students succeed, OCES made an overt effort not to stigmatize any student for any reason, including academic ability, athletic ability, or social class. Teachers never described their students as limited by family income or circumstances. Students were not tracked into "high-performing" and "low-performing" classes. Counselor Newkirk reported that abolishing academic tracking was the first thing she and Hamill did when they came to the school. On at least one occasion, when a particular classroom of students seemed to be outperforming another at the same grade level, students were shuffled between home rooms to balance things out and eliminate the perception of "high" and "low" classes.

OCES enthusiastically pursued the district policy of opening all school activities to any student who wanted to take part. The cheerleaders and dance team included anyone who cared to join. OCES made this possible by providing costumes—Hamill, the nurse, and other office staff sometimes sewed the dance costumes on a sewing machine set up in the office—so no students would be excluded simply because their parents were too busy or could not afford the costumes.

In keeping with the school philosophy of inclusion, special education students above the functionally mentally disabled level spent the entire school day in regular classrooms. The lowest-functioning students had their own classroom, but many spent most of the day in regular classrooms. Special education teachers worked in regular classrooms with all students, and integration of special education students was so smooth that fifth graders could not describe to the researchers the precise role of the extra teacher in their classroom. In most cases, special education students blended in so well that the researchers could not pick them out, even after a full day of observation.

OCES staff recognized the potential of the family resource center (FRC) supplemental program to help students perform better in school and regularly referred students and their families to it. Some referrals came from cafeteria staff, who noticed the condition of students' clothes and shoes as they passed through the serving line. The FRC provided a full-time nurse; offered clothing to low-income students; made arrangements for basic health care, physicals, and dental checkups; and purchased glasses for students. The FRC coordinator visited the homes of children with low attendance to identify problems and develop strategies for correcting the problem. In the fall of 1999, the FRC provided free haircuts, soap, toothbrushes, clothes, and school supplies at a before-school rally. A parent reported that her chronically ill child was able to attend school regularly and pay attention in class due to the care she received from the school nurse.

Data are limited on whether the extended school services (ESS) program (a supplemental program) has been successful in advancing the OCES mission of helping all students achieve. However, the evidence available suggests more positive results at OCES than in other schools studied. Four of the six OCES target students participated in ESS at some point in their schooling. The students reported engaging in academic games, completing homework, and working on writing portfolios during their time in ESS. All four students and their parents reported that the program had helped the children improve their academic performance. Of the remaining 10 parents of students who had participated in ESS in other schools studied, only three reported that ESS had helped their children, six said it had not helped, and one was unsure. In addition, a parent whose child attended school in a district near Orange County compared the ESS program at her school to the one she had heard about at OCES:

> The tutoring here [in a neighboring district] is 15 kids sitting at computers, and you get candy when you are done. Or if [students] have homework, they would finish it during that time. It wasn't one-on-one tutoring. . . . [We] had a friend who transferred to OCES. He was so far behind that he had a tutor to himself every day after school until he caught up.

Although these data are anecdotal, they do suggest that the ESS program at OCES was perceived as being more effective than at other schools.

Generally, parents of OCES students reported that the OCES faculty worked diligently to include and challenge all students and to help them overcome any barriers to learning. The parents interviewed expressed pleasure at the seeming absence of class bias at the school. One parent, whose son had a previous unhappy experience at a different school, said

> [There] seem to be good teachers [at OCES]. They don't make a difference between the kids who don't have as much as another. That helps [my son] a lot in wanting to do his work. If he doesn't like where he's at, he won't do his work.

Principal Hamill expressed the school philosophy this way: "They're our kids. We have high expectations for all of them. Income makes no difference. If they don't have, we make sure they do." Counselor Newkirk summed it up when commenting on a yearly award ceremony, "We don't give out warm fuzzies, we give out self-respect."

# Curriculum, Instruction, and Assessment Practices

## Professional Development

The Orange County central office and OCES principal both played strong roles in finding and funding professional development for teachers during the decade of reform. The district used a wide variety of professional development resources, including televised seminars on Kentucky Educational Television (KET), university personnel, state department of education staff, and consultants. Teachers were encouraged to attend state and regional professional meetings in their content areas, such as those held by the National Council for Teachers of Mathematics (NCTM). The district used all the extra professional development days allowed by the legislature early in reform; in 1993, for example, there were nine days of professional development in the school calendar.

Orange County began planning for the primary program a year in advance by hiring a consultant to meet with a districtwide planning team composed of central office personnel and two teachers from each elementary school. This team met with the consultant several times during the 1991-92 school year. Between meetings, the teacher representatives met with colleagues at their schools to refine and individualize their primary plans. During the summer of 1992, the district provided all primary teachers six days of training and planning to prepare for primary program implementation in the fall.

Many teachers attended training in specific programs and strategies, such as cooperative learning, whole language, Write to Read, calendar math, SUCCESS reading, Math in the Mind's Eye, science programs such as ACES, use of manipulatives in math and science, reading assessment, and the Foxfire approach. All OCES faculty were trained in SBDM and writing portfolios. Training opportunities were available during the summer months, but the district and individual schools allowed teachers to take time off for training during the school year and hired substitutes to cover the classroom duties. Primary teachers from OCES offered training to teachers in nearby districts in cooperative learning and the whole-language approach to reading.

In recent years, the school's professional development plan called for teachers to meet occasionally for half a day or so to share information and ideas and accomplish tasks. During 1996-97, for instance, counselor Newkirk divided the faculty into groups by grade level and subject area. The groups held three-hour meetings two to four times during the year and developed curriculum units and lesson plans.

## Curriculum and Instruction

OCES teachers engaged in many instructional and classroom assessment practices that promoted state reform goals and/or prepared students for the state assessment: focus on writing, curriculum alignment, varied instructional practices, computer use, and subject-matter integration. Teachers struggled, however, with achieving a balance between teaching basic factual knowledge and developing students' higher-order thinking skills.

**Focus on writing.** Based on observation and interviews, the most prominent change at OCES under KERA was an increased emphasis on writing. This was in direct response to the large amount of writing required on KIRIS and the heavy weight placed on writing in the accountability index. This was a strong incentive for OCES teachers, and those in other study schools, to focus on writing.

The writing focus was especially prominent at the fourth-grade level, where students were required to submit a writing portfolio as part of the state assessment. When AEL researchers visited OCES fourth-grade classrooms two weeks after school started in 1997, the emphasis on writing was evident. Students wrote in journals as an opening activity, and the two fourth-grade teachers engaged students in prewriting activities leading up to the first draft of a portfolio entry. The teachers displayed posters listing steps in the writing process. Fourth-grade teacher Sandra Burlington described her approach:

> I start right at the beginning with journals. I give them an avenue—we talk about something funny in your life or something sad, [or give the prompt] "I wonder about. . . ." It gets them started filling up the page. If they can't do that, then we deal with details and developing ideas. We don't start organization until about midway through the year. We focus really on content. I teach them the holistic scoring guide and all the vocabulary. . . . Some writings we look back at for growth, then we do process writing a lot, where the focus is not on the draft,

> but on the prewriting, planning, and revising. I teach a lot of revising strategies.

OCES fourth-grade teachers supported the emphasis on writing under KERA but reported that portfolios consumed a great deal of classroom time, particularly near the spring deadline. Third-grade teachers reported one year that they had supervised fourth graders while the fourth-grade teachers conferenced with students about their portfolio pieces. Similarly, when the class of 2006 was in the fourth grade, the two fourth-grade teachers combined their classes so one teacher could conference with students while the other worked with the combined class. Burlington commented on the time-consuming nature of test preparation, in general:

> The KIRIS assessment has had to become a focus. It has taken away from some of the more fun things. For example, I've always done a lot of creative things with literature. Like in *Charlie Pippin*, the grandmother painted bottles for a living, so my students did that before Christmas. It's difficult to find time to do them now, because you have so much material to cover and review. Doing portfolios takes time. I love writing, so I think that should be left [but]. . . time is so limited.

While the strongest emphasis on writing occurred at the fourth-grade level, the Orange County school district ensured that writing was part of the total curriculum by requiring portfolios in primary through sixth grades. These portfolios followed students from one grade level to the next. The researchers observed the class of 2006 writing in journals and working on portfolio pieces in the third grade. At the fifth- and sixth-grade levels, students kept integrated portfolios that contained writing pieces from each of the core subject areas. Each student also kept a separate science portfolio containing pieces that demonstrated the scientific principles of investigation, application, and research, along with a fourth area chosen by the student. These portfolios followed the students to middle school. OCES fifth-grade teacher Karen O'Connell explained in May 1999:

> The fifth grade keeps writing portfolios. They're finishing them this week and packaging them up for next year, including tables of content. It's an integrated portfolio with all the core content

> classes, so each teacher is responsible for a piece, plus they have a science portfolio they did in science.

OCES fifth-grade students confirmed teachers' reports. A student explained, "In the finished portfolio, there are usually at least a few portfolio pieces from every subject." The students noted, however, that the quantity and frequency of writing had decreased from in fourth grade. One student estimated that fifth grade required one-third less writing than fourth.

**Curriculum alignment.** Another area in which KERA and KIRIS influenced curriculum at OCES was that the school district aligned its curriculum with the academic expectations and *Core Content for Assessment.* Orange County began curriculum alignment efforts shortly after KERA passed and continued its efforts over the years as more specific curriculum guidance became available. As happened in all study districts, alignment efforts became sharply focused after the release of the *Core Content for Assessment.* At OCES, teachers relied heavily on the *Core Content for Assessment* to guide their curricula. Each year, researchers asked teachers of the class of 2006 how they decided what to teach and how to teach it; primary teachers replied they used the textbook and the *Core Content for Assessment,* while four of the five fourth- and fifth-grade teachers cited the *Core Content for Assessment* as their primary source. Fifth-grade teachers reported relying also on the *Program of Studies,* which was unavailable at the time primary and fourth-grade teachers were interviewed. Thus, the content to be assessed strongly determined what OCES teachers taught.

While OCES faculty members appeared to focus their efforts on the broad goal of helping all students achieve high levels of performance, rather than just on improving students' assessment scores, evidence suggests that pressure from the high-stakes accountability program led some teachers to emphasize the subjects tested in any given year. As noted above, writing received much more attention in the fourth grade (the grade at which writing is assessed for accountability purposes) than at other grade levels. Burlington indicated that other subjects assessed at the fourth-grade level also had been emphasized over nonassessed ones: "Trying to get to all the subjects is really difficult, so you tend to go with the ones you are really tested with and let the others slide. We do science, reading, and writing more than the others."

The district document that integrated the three state curriculum guides into one document was produced late in the AEL study period, so few data are available on the extent to which teachers were using it. Fifth-grade math teacher Wendy Hill, however, spoke about the document at some length:

> We are fortunate in our county to have a very supportive administrative staff at the central office. This "program of studies" chart is a kind of lesson plan book, which includes academic expectations, *Core Content*, and demonstrators from *Transformations*, so that you have everything at your fingertips concerning a particular concept. It was compiled by board staff, and, as a first-year math teacher, I have really, really benefited. It allowed me to transform my textbook from a tool into a guide, which is what I think it should be.

If other OCES teachers were this enthusiastic about the synthesized document, OCES may have had an edge over teachers in other districts with regard to future curriculum alignment.

**Varied instructional practices.** OCES used varying methods of instruction to give all students a chance to learn. Burlington remarked in 1998, "Lots of teachers [in other places] teach to the multitude, but I'm always conscious of the kids who aren't going to get it the regular way." Fifth-grade teacher Zelda Quinn in 1999 described the care taken in planning instruction:

> Whenever my kids have read a novel, I put a list [of activities] on the board to address multiple intelligences. Some may choose to address the novel through music, some do a skit, some do other things. . . . You need to design enough activities so you hit every child's learning style. . . .

Teachers at all grade levels used a variety of instructional strategies. In the lower primary classrooms (grades K-2), center activities were available to students. There was a mix of whole-class and small-group instruction in all grades. Hands-on work in science and math increased in the upper grades, where fifth-grade teacher Hill used manipulatives to introduce new concepts to students. Children's literature was used for reading instruction across the grades.

**Computer use**. Every OCES classroom had at least three computers, but district policy directed only one per classroom to be hooked to the Internet. Computer use increased with the grade levels. Computers were used for occasional projects in third grade, for word processing and some collaborative Internet and e-mail projects in fourth grade, and for Internet research and enrichment in fifth grade. OCES teachers were more effective at integrating technology into their instructional programs than were teachers at other schools studied, but, even here, teachers struggled to find the time to become proficient with computer use. Hill discussed the problem:

> I can use the computer, [but] I did not feel like I was well versed at integrating it into my everyday instruction. Those were actually the sessions that I went to [at the National Council for Teachers of Mathematics meetings] in Louisville and I've now got so many ideas I can't get them all in. I'm like, "Okay, now you get on the computer and get this and you get on the computer and get that." And so, yes, I'm learning that. I feel like I'm in . . . an evolving stage. I'm not a master of that yet, but I'm really trying to get better.

**Subject-matter integration.** Evidence of KERA's influence on curricular and instructional practices at OCES also appeared in the form of subject-matter integration. KERA goal 6 calls for students to connect and integrate knowledge and experiences from different subject-matter fields. In addition, subject-matter integration permits teachers to go into greater depth by covering several required topics in one unit or lesson. While the OCES curriculum was not fully integrated across content areas, subject matter was integrated where it occurred most naturally, such as across language arts: English, reading, writing, and spelling. For instance, teachers taught English skills or selected spelling words from a current piece of children's literature or from social studies or science units. Writing was done across the curriculum through written science lab reports and feature articles, letters to the tourism departments of states studied in social studies, or written explanations of solutions to math problems, for example.

Social studies and language arts were often integrated. Burlington and Vessels reported matching literature with social studies units. For example, students read *Charlie Pippin* (about a girl whose father had died in the Vietnam War) in conjunction with the social studies unit that covered that period of American history. Science and math subject matter were also integrated at times. Hill described a graphing project in which students recorded their heart rates under different conditions, then compared them to an average rate. Calculations and graphing were done in science class as well.

A weather unit observed in the upper primary combined science, social studies, math, and language arts, incorporating computer use. Students wrote letters to chambers of commerce in different states inquiring about various features, including the weather. They kept a record of local weather by reviewing newspaper weather summaries. They used the Internet to access weather data for cities in other states then entered those data in a computer spreadsheet to graph and chart results. While these types of units were not the instructional norm at OCES, they were more likely to occur at OCES than at other schools studied.

**Basic skills and higher-order thinking.** Although OCES teachers made many curricular and instructional changes directed by KERA, they found it difficult to balance the teaching of "basic skills" with developing students' higher-order thinking skills. Of the six KERA-mandated learning goals, goals 1 and 2 are directed primarily at basic skills and factual knowledge. The intent of KERA was to move classroom instruction toward ensuring that students could make sense of, connect, and use their knowledge in real-life problem-solving situations, as reflected in goals 5 and 6 (see Appendix A). Despite this, the focus at OCES through grade 4 clearly was on developing basic factual knowledge and competencies. Hamill reported that in the early years of KERA, the school's focus shifted away from basic skills—and the research team observed considerable experimentation during that time. Hamill noted that after several years, they decided it was a mistake to de-emphasize the basics, so they returned to their earlier focus. She remarked that now they were having trouble integrating higher-order skills into instruction:

> You can't leave the basic skills out; we found that out the hard way. . . . It's not stuck there, but we have to get where we can

> use the higher order. The downside is that when teachers finish basic skills, they think they have finished, but it is just the first step.

Observations in third- and fourth-grade classrooms largely corroborated this statement. The majority of instructional time was spent on factual knowledge and process skills. Teachers used factual questioning most commonly but posed occasional "thinking questions" in reading classes. Some teachers bemoaned the fact that they previously had incorporated projects, activities, and materials that were not solely skills-based because the pressure to cover all the skills to be tested left little time to develop new strategies. Vessels remarked:

> I've done a lot of skills this year—they miss out on them in primary and we're passing the buck. I'm not able to do as many hands-on fun things as I used to do because there's no time. . . . I detest the "read the chapter and answer the questions" type teacher, but I'm having to do that now. There's paperwork from the office, scoring portfolios, being on committees, all this other stuff. It all takes a lot more time than when I started. I can hardly concentrate.

OCES fifth-grade teachers reported spending time developing students' higher-order thinking skills. Hill told us she had students involved in monthly Math Olympics, where teams of students solved problems through research, employing the World Wide Web when appropriate. Varney explained why such projects were more beneficial than using textbooks:

> I want the students to use the knowledge they get in the classroom. We're after relating the activities to real-life situations, and I don't feel the text does that. . . . Activities are the key. The more activities you provide for them, the more the children learn. . . . I've never seen many kids learn a concept and retain it through just one activity. . . . We're not after short-term learning.

## Assessment Practices

The attention OCES teachers gave to various modes of instruction to meet the needs of diverse learners carried over into classroom assessment as well. Teachers assessed students in diverse ways: oral presentations, open-ended response questions, multiple choice tests, and projects. The researchers observed teachers and students working with scoring rubrics (which contain criteria for assessing a project, oral presentation, or open-ended response question) as early as the third grade. Varney commented, "The kids design rubrics, and they're harder on themselves than we are. That's something we've learned through KERA: making rubrics."

Not only did OCES teachers use varied assessment approaches, they closely monitored the progress of students to ensure each child was learning. While OCES did not have a systematic method for tracking progress toward KERA goals and expectations, they did track individual student achievement in the primary grades and schoolwide.

A districtwide mandate required OCES primary teachers to use the Kentucky Early Learning Profile (KELP) as an assessment-and-reporting instrument for students. Primary teachers reported that the KELP provided more information on student progress than did traditional assessment techniques but that completing the various anecdotal record-keeping components of the KELP was extremely time consuming. With input from district primary and fourth-grade teachers, the central office developed language arts and math skills checklists to replace the anecdotal record portion of the KELP. The checklists contained many skills that corresponded to the academic expectations, but not all expectations were included. Skills were categorized by the year of primary when they were traditionally taught. Teachers, however, checked off and dated the skills whenever a student learned them so the checklist would provide an easy overview of what students had learned by the end of the primary program. This practice allowed for continuous progress through the traditional primary skills—one student might learn a particular skill in the first year of primary, while another might not master the same skill until the second year.

OCES also tracked individual student progress with a commercially available, criterion-referenced test of basic skills, administered to every student at the beginning and end of each school year. A portion of this test required students to know a list of 400 functional words. Teachers in all subject areas and grade levels had students read, write, and use the words in sentences. Students received a special award if they had learned a specified number of words by the end of each year of the primary program. All students were expected to learn the full 400 words by the end of primary but were allowed to continue working on them in the upper grades. Hamill spoke proudly of a student with a measured IQ of 49 who had learned 329 of the functional words—more than some of the other students. At the end of the 1998-99 school year, the school held an assembly during which awards were presented to all children who had mastered the 400 words, including students in the upper grades. Newkirk commented on the ceremony and the students' pride: "It was my best day of teaching—if it had been a church, I would have joined."

While many classroom assessment practices at OCES were intended to track the progress of individual students, OCES also engaged in some assessment practices designed specifically to prepare students for the state test. Early in KERA implementation, the school provided minicourses in answering open-ended response questions. By the 1996-2000 phase of research, however, use of open-ended response and on-demand assessment formats had become more integrated into classroom instruction. For instance, open-ended response questions were often used to assess student learning at the end of instructional units. Sometimes, these questions constituted the total test; at other times, they were added to multiple-choice tests. The month before the state assessment, OCES would dedicate 90 minutes of a Friday to practice for KIRIS.

While the emphasis at OCES on helping all students succeed appeared to raise student confidence and scores on the state assessment, Burlington spoke about the pressure KIRIS had placed on her students:

> Students . . . don't have recess twice a day [anymore]. They are so pushed to succeed that we don't have time to do that anymore. I think we've gotten so caught up in academic expectations that they've forgotten these are children. I push really hard, especially at midstream, and it's hard on these kids. This can be a difficult adjustment period.

This kind of personal concern for students at OCES may have helped temper the pressure from the high-stakes accountability system. Shortly before a KIRIS administration in 1998, Burlington commented:

I get to the point where I am not going to continuously worry [about student performance on KIRIS]. I'm going to worry to a point, but I'm not going to let it overrun my one true belief that education must be fostered within each child. . . . It has to be internalized. . . . I don't see my kids as an academic score—I love them."

## School-Level Decision Making

Principal Hamill believed in getting teachers involved in decision making. Initially, teachers were wary of her leadership, suspecting that her friendliness masked a determination to do everything her own way. Over time, Hamill used the school-based decision-making structure both to convince the teachers that she truly meant to share leadership and to build a structure of committees through which teachers could exert leadership.

After several years of high test scores and low parent participation on the SBDM council and committees, however, OCES teachers voted to end the SBDM council, as allowed by the reform law. Teachers retained input into curriculum, instruction, and other decisions after the SBDM council was disbanded but on a less formal basis. Fifth-grade teacher Anna Newman, who had recently transferred to OCES, confirmed this in 1999: "[OCES] is not a hierarchical organization. It's *everybody's* input."

All teachers were on curriculum committees, one per core content subject, during the school improvement planning process. Both the principal and teachers reported that the resulting school improvement plan was useful and practical for instructional planning—one teacher called it her bible. As indicated earlier, Hamill allowed teachers to make instructional decisions and supported them, but she also held them accountable for the results.

In sum, OCES achieved the intent of KERA in moving decision making to the school level, although it was primarily educators involved in making policy decisions. Few parents participated in the SBDM council when it was in effect, so the faculty voted to disband the council. The fact that parents were not formally involved in policy decisions, however, did not mean parents were not involved at OCES. Communication was active among teachers, parents, some active volunteers, and a struggling Parent Teacher Organization. Most important, parents were extremely involved in decision making with regard to their own children. Newman described the situation in 1999:

> I have never ever been in a school where there is more active parent involvement. The goal of KERA is to teach students . . . and for every student to succeed. OCES actively—and I'm not talking about just giving it word of mouth—*actively* recruits parent involvement. I mean, I have never [seen anything like this] in 26 years of teaching. The first parent conference that I sat in with [the other fifth/sixth grade teachers], I was totally amazed the way the parent conferences were held. . . . There's like this professional-ese that everybody uses [at other schools where I've taught]—and teachers are up here and parents are down here, in most situations [holding her hands at different levels]. At OCES, no–everybody is right here [holding her hands level]. [Parents are asked,] "What do you want for *your* child?" . . . Every concern of the parent is met *immediately*.

Researcher Aagaard asked Newman, "So really the involvement you're talking about is making decisions about their own child's education?" Newman replied, "Right! *That's* what KERA's about!" The governance provisions of KERA, however, clearly were also about formally including parents in decisions regarding school policies, a component missing at OCES after the SBDM council had been disbanded.

## The Primary Program

OCES initially embraced the primary program enthusiastically. Primary teachers implemented many instructional practices aimed at addressing varying learning styles—one of the goals of the primary program and KERA. They used calendar activities, math manipulatives, whole language, reading programs, children's literature, center activities, thematic instruction, and hands-on science materials. Initially, primary teachers grouped their students at the old facility in multiage classrooms that included students aged five through nine. In the new school, the entire primary program was housed in two large open classrooms for several years. Eventually, students in the last year of primary (third grade) were combined with fourth-grade students in another large classroom. OCES also promoted success for all students through flexible grouping rather than fixed ability grouping. Grouping and regrouping students according to achievement, interest, or study habits, rather than creating fixed groups based on perceived ability, is designed to prevent negative labeling for slower-achieving students (Goodlad & Anderson, 1987). The Kentucky Department of Education promoted flexible grouping and regrouping as part of the primary program (Kentucky Department of Education, 1991, 1993a).

Flexible skill grouping was observed in primary classrooms and in the joint third/fourth-grade classroom during the 1996-97 school year. In the latter instance, the five teachers assessed all students in both grades on math and reading skills and used the results—as well as their observations of student skills—to assign students to flexible skill groups. At the end of each unit or chapter, students were shifted to other groups, or new groups were composed, based on student progress. For instance, in a skill group focused on multiplication, some students might be assigned to a group reviewing place value, while others were considered ready to move on to division. Reading groups were shuffled less frequently than math groups. The five teachers and the Title I teacher each taught groups that might consist of students from both grades or a single grade, depending on the level of the skill sequence for which they were responsible. The Title I teacher generally took the lowest-skill group but not always. Teachers sometimes shuffled their responsibilities so that students would not associate teachers with certain skill levels and stigmatize the students in a particular group.

This type of flexible grouping for basic skills instruction allowed for true continuous progress. All students advanced at their own rates without regard to the pace of others in the classroom. This cross-grade grouping scheme continued into the 1997-98 year but ended shortly after one teacher was transferred to the lower primary. The loss of the teacher resulted in fewer skill groups and an increased workload for the remaining teachers. Eventually, the skill groups were taught without sharing students between grades.

The flexible grouping of students required substantial teacher teamwork, both in planning and executing. Principal Hamill tried to schedule common planning time for teachers at the same grade level; often, this planning hour included the teachers' lunch break. Therefore, a good deal of team planning also occurred after school. Third-grade teachers in 1996-97 planned together and team-taught frequently within their own grade level, and the fourth-grade teachers taught writing to the third-grade students on Fridays.

The OCES facility greatly enhanced the ability of primary teachers to work as teams. In the large open classrooms, teachers conferred informally throughout the day and covered for one another when a teacher had to focus on an individual student or was called to the office or elsewhere. The extra space made it easy to combine classes for joint instruction—a difficult task in a small, self-contained classroom.

OCES teachers initially implemented the primary program enthusiastically and effectively but found the increased workload overwhelming as they engaged in many hours of professional development, created new units of study, located materials, met and planned after school, and completed detailed assessments on each child. Three primary teachers in 1994 remarked they were being asked to do too many new things at once. One teacher described it as being "bombarded" with new information, ideas, and requirements.

The fatigue factor was exacerbated by reports from teachers that incoming fourth-grade students were not ready to perform well on the state assessment. These reports were perplexing because KIRIS accountability indexes at OCES had improved at a steady rate. Yet, fourth-grade teachers perceived that exiting primary students lacked basic spelling and math skills. This perception may have resulted from changes in primary instruction, which, for a time, did not emphasize rote memorization of spelling word lists or math facts, yet the perception did not abate even when primary teachers returned to a basic skills emphasis.

OCES tried to ease the transition from primary to fourth grade by combining third and fourth grades in one of the large classrooms.* After working with fourth-grade teachers, the third-grade teachers reported finding themselves unsure how to prepare students for the KIRIS test while implementing the primary program attributes, so they returned to more traditional practices. Third-grade teacher Nan Rothman described in 1997 the dichotomy she perceived between the primary and accountability grades:

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*While KERA mandated replacement of grades K-3 with an ungraded program, educators at OCES and other schools studied continued to think in terms of gradedness and to organize the primary program into a modified grade structure.

> We have a contradiction between what we're doing and what primary was supposed to be doing. It was to have these wonderful hands-on activities and time for learning, then [the state] forced down the curriculum on us. . . . We have heard numerous people complain that kids spent too much time on . . . thematic approaches, hands-on, what have you—so they couldn't perform on the KIRIS test. Now, I do a few short themes, but if it doesn't do skills and it lasts more than 2 weeks, I won't do it. [Students are under] lots of pressure at fourth [grade], and so now we're applying pressure in third [grade]. We're aware of the contradiction, so give us credit.

Principal Hamill commented that combining third and fourth grades showed teachers they were not expecting enough of the K-3 students: "Moving third grade in with fourth makes [the third grade teachers] aware, but now we need to back that down and expect more of the lower primary."

## Summary of Reform at OCES

### Extent of Reform Implementation

The research questions posed at the beginning of this chapter asked to what extent and under what conditions during the 1990s did OCES help all students achieve KERA goals; implement curriculum, instruction, and assessment practices consistent with reform goals; and make key decisions about how to improve student learning and implement the primary program in ways that contributed to reform goals. The data shared above indicate that OCES faculty members understood and agreed with the central goal of KERA—to help all students achieve at high levels—and they used the various KERA components and strategies to attain this goal. OCES teachers dedicated themselves to helping all students succeed through varied instructional practices, full inclusion in academic and extracurricular activities, and use of the family resource center to help students overcome barriers to learning. They also attempted to tailor classroom assessment to student needs to track student progress over time.

In addition, OCES teachers were motivated by the KIRIS accountability program, as evidenced by the strong emphasis on writing, curriculum alignment with the accountability assessment, and time devoted to test preparation. Consistent with KERA goal 6, teachers taught some subjects in an integrated fashion. Lack of time, expertise, and motivation, however, limited the extent to which OCES teachers developed students' higher-order thinking skills, as required by KERA goal 5.

Through an ongoing process of communication and shared decision making, the principal, counselor, and teaching faculty made decisions about student learning at the school site. Parents were involved in instructional decisions about their own children but were not included in school policy decisions once the SBDM council was disbanded.

Initially, primary teachers enthusiastically implemented the primary program in ways that facilitated reform goals. As the task sapped their energy and pressure from parents and upper-grade elementary teachers increased to focus more strongly on the "basics," primary teachers implemented fewer of the primary program strategies over time, at least at the third-grade level.

The efforts of OCES educators, while not perfect, surely contributed to increased KIRIS accountability indexes, parent satisfaction with student learning, and relatively stable high scores on a nationally normed basic skills test, the CTBS.

## Conditions for Reform

The OCES story reveals a number of conditions that likely contributed to the school's success in meeting reform goals. First, the school and district appeared to have been ready to implement KERA. Because the overarching goal of KERA—to ensure high achievement for all students—matched that of the district and school, interviews revealed OCES educators had a strong sense of how the various KERA components were meant to work together toward achieving this goal.

Second, the large influx of funds under KERA fueled enthusiasm for reform and enabled the district and school to offer higher salaries and obtain professional development and materials to implement systemic reform. Leadership was central in making use of the new resources. The Orange County central office shrewdly managed the large influx of state money, offering the teachers in the county many opportunities for professional development. Administrative staff members also knew how to access additional resources when needed.

Third, district leadership provided a vision and support in implementing KERA. The central office promoted a philosophy of full inclusion and opportunities for all students to succeed. The district administration also offered numerous supports in implementing the reform, including increased opportunities for professional development (as mentioned above), developing a primary skills list used districtwide to track individual student progress, and compiling curriculum information into a more useable document from state guides. However, the central office sometimes usurped school decision-making authority. The central office required that all schools use the KELP for primary assessment and that students at all grade levels develop portfolios.

Fourth, school-level leadership provided by OCES principal Hamill and counselor Newkirk promulgated the "all can achieve" ethic in various ways, such as by eliminating ability tracking and holding teachers accountable for student progress. Hamill and Newkirk perpetuated a sense of teamwork among the faculty by sharing leadership with teachers and supporting them in the classroom. Having two strong leaders with a common philosophy and approach helped spread the considerable leadership workload.

Fifth, the vast majority of OCES teachers adopted the schoolwide belief that all students can achieve at high levels. This belief guided everything the school did and led teachers to welcome a variety of students into regular classrooms, vary instructional practices to address diverse learning styles, track individual progress and make adjustments as needed, and help all students believe they were capable of high achievement.

Sixth, OCES attempted to implement a SBDM council that allowed for parent involvement in policy decisions, but few parents expressed an interest in participating. Instead, the majority of parents interviewed over the decade of research trusted the school to do what was best for their children. The fact that OCES strongly involved parents in making decisions about their own children's learning likely contrib-

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uted to parents' willingness to ultimately leave school policy decisions to the faculty.

Seventh, state policy itself drove much of the implementation of KERA at OCES. The emphasis in the KERA learning goals on thinking, problem solving, subject-matter integration, and real-life application led OCES teachers to experiment with subject-matter integration, hands-on activities, and project-based instruction. Pressure from the high-stakes KIRIS accountability system helped the school focus its curriculum around the *Core Content for Assessment* and provided incentive for the schoolwide writing program.

But the OCES case also revealed conditions that hindered full realization of the reform. While OCES agreed with and adopted KERA's central vision of ensuring high achievement for all students, pressure from the high-stakes KIRIS accountability system led teachers to emphasize assessed content more strongly than content that was not assessed. It also limited the risks they were willing to take to try new, unproven instructional approaches to develop students' higher-order thinking skills. In addition, even though Orange County increased the quantity and quality of professional development under KERA, the county did not have in place the long-term, school- and classroom-based technical assistance and follow-up necessary for radical classroom changes (Ball & Rundquist, 1993; Heaton & Lampert, 1993; McCarthey & Peterson, 1993; McLaughlin & Talbert, 1993; Sykes, 1990; Wilson et al., 1993).

A primary deterrent to the full implementation of KERA was the amount of time and energy required. For example, OCES primary teachers repeatedly reported there was not enough time to learn and implement new instructional and assessment techniques and to meet with colleagues regularly. Teachers at the intermediate level reported backing away from more innovative approaches because they lacked the time to cover all the *Core Content for Assessment* unless they proceeded in lock-step fashion. KERA mandates and the schools' own efforts to individualize the educational program for each child meant that teachers spent considerable time keeping track of individual student progress and sharing the information with parents in regular conferences. The workload contributed to an exodus of one-third of the OCES teachers at the end of the 1998-99 school year. While some teachers left for personal or professional reasons, Hamill and the remaining OCES teachers reported that others had left because they had tired of the extra work required. Jackie Varney, an OCES teacher, commented:

> I had a teacher [from another school in the district] say to me, "I make the same salary you do, but I don't have to do half the work you do." . . . We [at OCES] don't have a life. We're not an 8-to-3 school and go home.

## CHAPTER 4

# Kessinger Elementary School

## The Context

### The Community

Kessinger Elementary School* (KES) is one of three elementary schools in Lamont County, a small, heavily agricultural county with very little industry. Finding it increasingly difficult over the past decade to make a living from small family farms, many residents became contract farmers, mass producing chickens and pigs for large poultry- and pork-producing corporations. The county is not wealthy and is best described as a working-class, farming community whose citizens make a living through farming and/or by commuting to nearby small cities for work. The Kessinger area posted the county's lowest per capita income (about $9,300 versus $11,153 for the state), the lowest median household income (nearly $19,000), and the highest percentage of persons in poverty (about 20 percent versus 19 percent for the state), based on the 1990 census.

### The District

The Lamont County school district is quite small, with about 1,750 students, mostly White, enrolled in five schools. Until the 1995-96 school year, the district had a K-8, 9-12 structure, with four elementary schools and one high school. A new middle school opened in 1995-96; the smallest elementary school merged with KES, and the district converted the former elementary building to a family resource center serving all elementary schools. There are now three elementary schools (K-5), a middle school (6-8), and a high school (9-12).

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*Names of people and places have been changed to protect anonymity.

Lamont County educators and school board members have long considered their school district financially poor. This is due primarily to a very low tax base, the result of a lack of industry and residents' opposition to raising property taxes. Lamont County was one of the 66 districts involved in the original lawsuit seeking more equitable funding from the state. Yet, several Lamont County school board members and educators told us that the resulting KERA legislation had not produced the level of adequate funding for their district they had hoped the lawsuit would produce. This perception derives partly from the KERA funding formula. This formula based district wealth on property values, which are relatively high in agricultural districts even though farmers typically have relatively low incomes. Thus, the formula required the local district in Lamont County to provide a substantial portion of school funding. Assessed property values per pupil of approximately $134,000 in 1989-90 and more than $218,000 in 1997-98 ranked the district far ahead of a poor county like Orange; even so, Lamont County educators and board members believed the funding formula was unfair to their agricultural district.

In spite of this perception, Lamont County experienced a 62 percent increase in state revenue between 1989-90 and 1997-98, and the total local and state revenue per pupil rose from about $2,700 to more than $4,800 during that same period (Office of Education Accountability, 1999). Lamont County educators conceded over the years that funding for educational materials had increased greatly under KERA; however, the relatively small local tax base kept the district from reaching funding levels of other districts. For instance, salaries of district and school administrators in Lamont County are among the lowest in the region; turnover of school principals and central office staff is frequent. In the decade after KERA passed, the district had four superintendents, three assistant superintendents, and three instructional supervisors in the central office; four principals at the high school; two principals at the middle school; three principals at one elementary school; five principals at KES; and four principals at

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Riviera Elementary School. Lack of funding for assistant principals or counselors at the elementary level exacerbated problems. Each elementary principal had to bear the full burden of administrative oversight and instructional leadership.

Due to frequent turnover and financial constraints, the central office had difficulty providing strong direction and sufficient resources for the district. In 1990 there were three central office administrators, each of whom had numerous responsibilities. By 1998 the number had increased to five, enabling the central office to become slightly more specialized and supportive.

Generally, the central office staff's stance toward KERA was neither enthusiastic nor resistant. The staff viewed KERA as a state mandate and did what they could to implement it. They attended required state and regional meetings and shared what they had learned with schools. They assisted schools in analyzing test data and developing required planning documents, such as professional development plans and school improvement plans. They provided schools with the necessary information for identifying and selecting professional development opportunities but did not offer much other support for professional development. For instance, when schools were scrambling for professional development prior to implementation of the primary program, individual schools were mostly on their own in terms of finding time for teachers to meet and plan, determining where they might visit primary programs, and arranging for the time and resources to make such visits.

## The School

Kessinger Elementary draws its students from the town of Kessinger and another nearby small town, as well as rural areas in the county's east end. When the study began, the school had the district's highest rate of students qualifying for free or reduced-price lunch: 45 percent. By 1998-99 this figure had reached nearly 50 percent. In September 1998 Kessinger Elementary had an enrollment of about 350 students in grades K-5. Only two students were minorities (Hispanic). The building is a two-story brick structure that originally housed Kessinger High School; a recent renovation to the building gave it a much needed face-lift.

Like the Lamont County central office, KES experienced a great deal of turnover in leadership. Over the 10 years AEL conducted its research, the school had five principals. Lew Gunther, the principal at the time KERA passed, was a soft-spoken and well-liked local man who was not vocal in his opinions and who left it to teachers to work out KERA implementation within their own classrooms. Gunther opted to return to the classroom at the end of the 1993-94 school year. The school had a new principal each of the next four years. Fewer individuals applied for the position with each successive vacancy. From 1994 to 1997 the school-based decision making (SBDM) council hired three different principals from outside the district, all of whom were fairly vocal in their support of the basic KERA tenets. Each left after one year; the first two to take jobs nearer their homes, and the third because of factionalism among the faculty within the school. From 1997-98 to the present, leadership stabilized again with the hiring of Catherine Carothers, a Lamont County native who took a moderate approach to KERA reform. Carothers was one of only two or three applicants for the principalship.

In the face of continually revolving principals, KES was held together by a stable teaching staff. The faculty experienced little turnover during the decade, and most of the teachers were innovative, enthusiastic about their jobs, and certain of their convictions regarding education. They expressed a strong desire for their students to enjoy school and feel good about what happened there. These attitudes played out in teaching styles, which included hands-on activities and encouraged student self-expression. Little instructional time was wasted. The teachers' work ethic and general approach surely contributed to slowly rising test scores and widespread parent satisfaction.

The lack of strong, consistent leadership was a factor in the faculty's seeming difficulty in pulling together toward common goals. Teachers reported that, even prior to KERA, they differed in their philosophies, approaches, and personalities. Apparently, they implemented their own philosophies and instructional approaches in relative isolation. Having to develop a school consensus on how to implement the primary program and how to prepare students for the KIRIS assessments forced differing philosophies to the surface and made more public the existing factionalism as to how best to proceed.

# Implementation and Effects of Reform at Kessinger: Helping *All* Students Achieve

## Student Achievement and Parent Satisfaction

**Assessment scores.** Kessinger's assessment scores rose slowly but steadily in the decade after KERA's passage, although the scores sometimes fell short of state-mandated goals. On the KIRIS assessment, the school set an accountability index baseline in the low 40s, improved to the mid 40s for the 1992-94 biennium, improved again to nearly 50 for the 1994-96 biennium, and improved again to the low 50s for the 1996-98 biennium. Compared to OCES, KES improved gradually on KIRIS assessments but not enough to earn rewards during each two-year accountability cycle. Examining student performance by subject area, KES moved large percentages of students from the novice/apprentice categories to proficient/distinguished in the areas of reading and math. KES performed very respectably on the new CATS accountability assessments, with a total score in the middle 60s. On the nationally normed CTBS, KES did not score as high as OCES in 1997; it started with much lower CTBS scores (i.e., percentile in the mid 30s) then increased to nearly the same level of performance as OCES by 1999 (i.e., percentiles in the low 60s).

**Parent satisfaction.** Parents of five randomly selected students interviewed in 1997-98 and again in 1998-99 believed KES teachers were doing a good job. These parents reported unanimously during both the fourth- and fifth-grade years that their children had learned more in school than they had expected. One parent commented:

> [My son's] vocabulary has really broadened this year, probably due to the writing portfolio. . . . Also, problem-solving skills and different techniques for problem-solving—I see him apply those at home. I think that's pretty neat, too.

Another parent compared her daughter's schooling to that of her son, whose elementary education had occurred prior to KERA:

> She is doing really well in her classes, and she is a little advanced in math this year. They did not have all of this when [our oldest son] was in elementary school. I know she learns a lot more, does more things than [the brother] did. The things she learns

> and writes, it is a lot more than what he ever did. I don't remember him getting in depth like they do now. They touched on things but not like she has. . . . I think [KERA] has been a whole lot better for them all. They learn more and get more involved.

## Beliefs and Behaviors Concerning Student Capabilities

Unlike OCES teachers, KES teachers lacked a central mission to focus their implementation of KERA. Typically, KES teachers did not articulate the belief that all of their students were capable of high achievement but neither did they complain that their students were incapable of learning at high levels (as did teachers at some of the schools studied). There appeared to be a general willingness among the faculty to work with all students.

When asked specifically, KES teachers generally expressed the view that all students can achieve at higher levels than previously assumed but not at the *same* high levels. Teachers conceded, however, that their teaching had been influenced by the push to make sure all students achieved the proficient level on KIRIS assessments. At the fourth-grade level, in particular, teachers, parents, and students frequently reported that teachers pushed their students very hard. Fourth-grade teacher Katie Blackstone commented:

> [The requirement that all must become proficient] has definitely affected fourth grade and primary, too. You have higher standards and hopes that those who can [become proficient] will achieve [to] that level. I don't know that that is what is best for the lower achievers because it puts more stress on them.

Perhaps the views of teacher Rhonda Vallin best exemplify the somewhat equivocal attitude about this subject. A long-time primary teacher, Vallin was a KERA enthusiast from the beginning because, as she remarked in 1997, "KERA has given me permission to be who I am." Visitors to KES were often impressed by the wealth of interactive materials in Vallin's room and by her enthusiastic approach. One KES principal described her as among the best teachers she had seen. Yet by 1997 Vallin was ready for a change and switched to fifth grade, which meant she taught the class of 2006 in third grade and again in fifth grade. During this latter year, she expressed her opinion about the KERA philosophy that all children can achieve at high levels:

> I'm almost ashamed of this answer. Most of the answers I've given before were, "I expect every child to achieve at high levels." But the reality, with all factors being considered, if you don't have control of all the [factors], you cannot do that. We're not being realistic. I believe for every single [student], even the high achievers, that they can achieve at a higher level than they are now. But there are some students who can never achieve in some things at a high level, and it scares me about KERA that there's that expectation and what it may do to some students. Some students are suicidal. I can think of a couple of instances where if I could say where they'll live and even what they [would] eat, [they might be able to achieve], but it's not realistic to say those children can achieve at high levels in the situation[s] they're in now. But I'll still keep trying. The way I would be happy with it is, . . . "All children can achieve at higher levels than they're achieving now if they're given the right conditions."

This sort of response reflected a general shift in the attitudes of KES teachers in the late 1990s, which appears to be related to the school's performance on the state test. When the research team met with KES teachers to share preliminary research results in the fall of 1999, the teachers were highly frustrated over the recently released 1999 CATS accountability scores. The local newspaper had compared performance of the three elementary schools and noted that KES had not scored as well as the school in the county seat. For the first time, KES teachers complained that their student body was less capable, particularly when compared with this other elementary school. In addition, they complained for the first time about the amount of time and energy that special education students required; the school had recently acquired several students with learning and behavior disorders.

Perhaps because KES lacked a central vision of helping all students achieve, there was less evidence than at OCES that the school had integrated various reform components into an overall program for school improvement. For example, the family resource center for KES was not immediately visible to KES students and families because the center served three schools and was located a few miles from town.

Even so, the five randomly selected target students and their parents who were interviewed were aware of the center and regarded it positively; three of the students had attended recreational or back-to-school events there. The family resource center was less focused than the OCES center on serving individual students and more focused on improving parenting skills, involving parents and students in school activities, and building student self-esteem.

Data are limited on the extent to which KES's extended school services program helped students progress toward KERA goals. The focus between 1996 and 2000 appeared to be on basic skills in the primary grades and on portfolio development and preparation for the KIRIS assessments in the fourth grade. Three of the five target KES students worked on portfolios during the extended school services program in the fourth grade. Two others participated in the extended school services program at some point in their schooling; parents of the latter two were unsure if the program had helped their children perform better in school.

## Curriculum, Instruction, and Assessment Practices

### Professional Development

Providing adequate professional development to help teachers implement KERA was problematic in Lamont County, where few dollars beyond state funding were available for professional development. State funding for professional development was $1 per student in 1990-91 and $5 per student in 1991-92. An appropriation of $23 per student was reached in 1995-96. The central office did not play a strong role in identifying professional development opportunities for teachers, essentially leaving the issue to school principals.

During a districtwide teacher focus group in the spring of 1992, teachers at other elementary schools in the district reported that their principals had provided planning time during the day so primary teachers could begin preparing for the implementation of the primary program. KES teachers, however, were given no such time and had only begun planning for the program in the spring (the program was to be implemented that fall). The main source of professional development opportunities throughout the district was the regional professional development consortium, which offered three- to five-day workshops regarding hands-on mathematics programs and whole-language and literature-based programs for the primary grades. In addition, the Lamont County school district sponsored professional development on assessment preparation (e.g., preparing open-ended response questions and performance events) and implementing the SBDM council. The district also brought in university professors and teachers from other districts to present information and techniques for primary program implementation. These district-sponsored sessions typically occurred during two professional development days each year, one in the fall and the other after Christmas. As in other districts, several Lamont County teachers became writing and math portfolio cluster leaders, obtaining training and information on portfolios from regional and state trainers and then sharing the information with their colleagues.

About 1995-96, the district began focusing much of its professional development effort on curriculum alignment. Teachers met in teams at their own schools to align curriculum with the KIRIS assessments and, later, with the *Core Content for Assessment*. Many teachers described this as among the best professional development activities they had experienced because it gave them a formal opportunity to talk about curriculum with colleagues, which had happened rarely in previous years.

Overall, professional development under KERA became more focused and increased in length (from three hours to several days for some workshops) in Lamont County and, consequently, for KES teachers. Over time, schools engaged teachers in continuing on-site professional development activities as they aligned curriculum. When compared to teachers in Orange County and Vanderbilt County, however, Lamont County teachers obtained only the most rudimentary training, typically in the form of one-shot workshops without follow-up and technical assistance. At KES, the principal in place for the first four years of KERA failed to create professional development opportunities; subsequent principals did not stay in place long enough to make a difference. In addition, KES teachers were granted common planning time for only one year throughout the 1990s, so there were few opportunities for collaborating with colleagues during the school day. Consequently, KES teachers were left to learn about and implement KERA mostly on their own.

## Curriculum and Instruction

Without strong direction from district or school leaders, a unifying school vision, or ongoing intensive professional development, KES teachers relied on direction from the state, the district, or their own ingenuity to construct classrooms that would help students achieve KERA goals. Generally, their efforts were less coherent than at OCES. Even so, many aspects of curriculum and instruction were quite similar to OCES, probably because KES teachers were generally supportive of KERA learning goals. The difference was that KES's efforts to implement KERA often appeared to *respond* to state mandates while OCES used state mandates to *advance* its mission of helping all students achieve. The following sections describe the major changes at KES under KERA—focus on writing, curriculum alignment, varied instructional practices, and computer use—as well as the problems associated with establishing a unified focus for implementing KERA while balancing instruction in basic factual knowledge with the development of students' higher-order thinking skills.

**Focus on writing.** As was true at OCES and the other schools studied, the most noticeable curricular and instructional change at KES was an increased focus on writing. Writing occurred at all grade levels observed from 1996 through 1999 but was most intense in the fourth grade, where there was a required writing portfolio. When the class of 2006 was in the third grade, the district required third graders to develop writing portfolios that would follow them to the fourth grade. Third-grade teachers reported taking students through the steps in the writing process to develop portfolio pieces. Unlike OCES third graders, however, KES third-grade students did not work on writing during any of the researchers' four announced observations that year.

The intensity of writing instruction increased dramatically in the fourth grade. When researchers visited the school two weeks after school began, students in two of the three fourth-grade classes had already begun developing portfolio pieces. In each subsequent visit to the school, researchers observed students engaged in writing activities, including composing first drafts, typing portfolio entries into the computer, and conferencing with the teacher. KES teachers appeared to have integrated writing instruction into their curricula throughout the school year and believed the increased emphasis on writing was useful for students. Fourth-grade teacher Lou Ann Laslie, who served as fourth-grade writing portfolio cluster leader for Lamont County, commented on how KERA had influenced her instructional approaches:

> **Laslie:** I incorporate much more writing in my teaching because in fourth grade, we have to have the portfolio. But even if that were to be dropped as a requirement, I would still keep doing what I'm doing because I do believe that strongly. The only thing I would change would be . . . the [portfolio] deadline. . . . It is not until January or February that the students have reached the level of maturity [in their writing]. When the portfolios are due is when they are really understanding what it is all about, but by then it is over. There would not be as much pressure. I would like for them to be due in May.
>
> **Researcher Kannapel:** Would you have started doing this kind of writing without KERA?
>
> **Laslie:** I always liked teaching writing, but I probably would not have done it in as much depth or devote as much time as I do now. In the beginning, I felt that the portfolio was a separate entity, but now it really grows out of what I am already doing. So I have learned along with the students better how to incorporate it into my teaching. That took about two years.

Four of the five parents interviewed approved of portfolios, as explained by this parent:

> The portfolio was beneficial, and all the writing they do throughout the year helps make that easier. . . . I think the writing is good because even a lot of employers require writing samples and tests now. . . . [This year] the fourth-grade teachers hit the ground running and didn't wait until January or February for a blitz to cram everything in. They started at the beginning of the year to prepare for the test and writing. [My son] worked on his portfolio just about from the beginning of the year. . . . So he was doing writing at all stages every day.

Even though KES teachers integrated writing into their regular instruction, they reported that portfolios had taken an inordinate amount of class time as well as their own time, especially as the portfolio deadline approached after Christmas. Other teachers in the building covered classes for fourth-grade teachers so they could conference with students. The principal and special-areas teachers also conferenced with some students. Teachers spent time working with students on portfolios during the extended school services program as well as on their own time. The same parent quoted above took note of the extra time teachers had devoted to help students complete their portfolios:

> They did a lot of conferencing—a lot of peer conferencing—and [my son] conferenced with his teacher during class and the teacher would stay after school with two or three kids for them to work on their pieces. She called kids in during the Christmas break one day to work on portfolio pieces. She did put in a lot of extra hours to accommodate the kids—that was really neat.

Writing continued in the fifth grade but not at nearly the same level of intensity. All three fifth-grade teachers reported they had students do some portfolio-like pieces but had not taken them through the revision process or had them compile writing pieces into portfolios (although a central office administrator reported that the school board recently had approved a districtwide policy requiring that all K-12 students compile a progressive portfolio). In 1998-99 Vallin was asked whether her students had kept writing portfolios; she responded:

> No, not this year. They've been doing more open response because [the test for fifth graders has] two or three open responses in each section, so that's the type of writing we focused on, at least before testing. We do have writing throughout the year. After a year of focusing on writing severely in fourth grade, it's almost a sin to continue such strenuous writing exercises. We still do the same types of writing but don't polish them to perfection as we did in fourth grade. We still conference and peer conference. But it's not a completed portfolio—the writing pieces go home with children when they finish. . . . It's not that writing is over after fourth, but you have to make sure students are prepared for what they have to do [on the KIRIS test] at the end of the fifth grade.

A fifth-grade student commented:

> Before the CATS test, we would be doing open-response questions and have to write there, but otherwise we wouldn't do much writing. In fourth grade, on our writing portfolio, we [had] to write a whole lot more stories, and, this year, we [didn't] write stories.

**Curriculum alignment.** As at OCES, KES teachers aligned their curricula to the *Core Content for Assessment* and gave special attention to the subjects tested in any given year. The district administration focused teachers' attention on the academic expectations and *Core Content for Assessment* by forming a district committee that created an elaborate system for charting coverage of the *Core Content for Assessment*. Teachers at each school were required to submit curriculum reports at the beginning of each unit documenting which *Core Content for Assessment* items the unit would cover. This information was then transferred to a large chart so each school could track coverage of the *Core Content for Assessment*.

KES teachers were less diligent about completing these reports than teachers in other Lamont County schools, and some of the principals who rotated through the school questioned the value of the charting. Even so, KES teachers reported using the *Core Content for Assessment* to determine what to teach each year. Six of the eight teachers who taught the class of 2006 from 1996 through 1999 reported using the *Core Content for Assessment* to define the curriculum, and four of the eight listed it as their primary source.

Teachers also reported and were observed emphasizing the subject matter that was tested each year. Fifth-grade teacher Mary Ash remarked:

> The new CATS test holds fifth grade accountable for social studies, math, practical living, and arts and humanities. I spend a lot of extra time on the areas that we're accountable for as fifth-grade teachers.

Fifth-grade teacher Diana Venable said that the *Core Content for Assessment* had limited her choice of instructional approaches:

> I used to use SUCCESS in Reading and Writing and really felt successful. We did 30 minutes of reading, 30 minutes of writing,

> 30 minutes of research, and 30 minutes of word study every day. I really liked it. Then when they developed the *Core Content*, I felt I might be leaving parts of content out, so I felt I must get back to [the] textbook.

A positive result was that curriculum alignment enabled Lamont County teachers to confer with colleagues about who was teaching what and to make sure the school was teaching to the *Core Content for Assessment.* Laslie commented in 1998 that the process of aligning curriculum with the KIRIS assessments had been very useful: "It really raises a lot of questions [about] what you are teaching and when—and what to do to improve it."

**Varied instructional practices.** Many KES teachers reported that they had used active instructional approaches before KERA and that KERA had affirmed their approaches. They allowed for a moderate amount of student freedom, activity, and self-expression in the classroom. In the early years of the primary program, several teachers obtained professional development about hands-on programs in math, language arts, and science and incorporated them into their instruction. Learning centers designed to allow students to work independently on specific skills were also set up in primary classrooms. During the final primary year for the class of 2006, teachers regularly employed trade books (commercial children's literature) as part of reading, math manipulatives and math journals, individual and group science projects, and learning centers.

In the fourth- and fifth-grade years, teachers used textbooks and worksheets to a greater extent but did not rely exclusively on them. Students read from trade books, engaged in individual and group projects, and participated in hands-on science activities during a weekly science lab. Teachers reported using spelling resources other than the textbook, and research projects were fairly common. During both the fourth- and fifth-grade years, parents and students alike reported that classrooms were largely teacher directed but that student projects, hands-on activities, use of trade books, writing activities, and integration of subject matter occurred regularly. KES teachers also integrated the curriculum somewhat, although not as much as at OCES. It was common for KES teachers to coordinate reading selections with social studies or science topics and to incorporate writing into all subject areas.

**Computer use.** Computer technology was not used to the extent that it was at OCES. At KES, computers were used primarily for word processing. Third graders took keyboarding classes in preparation for typing portfolios into the computer in fourth grade. Computer games and the Accelerated Reader program were also used for skills reinforcement and development. Only fourth-grade classrooms at KES had more than one computer, so students at other grade levels were limited to an hour or so per week in the computer lab. Only one student computer, set up in the library, had Internet access. Fifth-grade students reported minimal use of computers. Also, the district could not afford to hire a full-time technology coordinator, so this responsibility was added to the already heavy workload of a central office administrator who had a rudimentary knowledge of computers. The KES Title I teacher was appointed the school technology coordinator because of his proficiency with computers. However, he had to continue other teaching responsibilities and had little time to help teachers choose and integrate appropriate technology into their curricula.

**Lack of common purpose.** While KES teachers individually were innovative, energetic, and supportive of many KERA tenets, they were hindered by the school's lack of unified curricular and instructional focus. Because of long-standing philosophical and personality differences exacerbated by weak central office support and ever-changing building leadership, these talented and innovative teachers were never able to work together in a unified and systematic way toward improving student learning. Frustrated by their early attempts to reach consensus on KERA implementation, KES classroom teachers returned to a more isolated mode of instruction, with teachers doing what they thought best to help students succeed. By 1999 only two primary teachers were teaming, fourth-grade teachers were semidepartmentalized but did not plan together, and fifth-grade teachers operated self-contained classrooms with very little curricular coordination. In addition, there was little evidence of schoolwide planning toward attaining KERA goals, although individual teachers were adhering closely to the *Core Content for Assessment* in planning instructional programs.

**Basic skills and higher-order thinking.** Another challenge for

KES teachers, as at OCES and at the other study schools, was helping students develop higher-order thinking skills. KES teachers continued to focus more on basic factual knowledge than on the higher-order thinking mandated by KERA goals 5 and 6. There was, however, some evidence of teacher-directed thinking and problem-solving activities, particularly at the primary level. In the three third-grade classrooms, for example, researchers observed math lessons in which students worked in pairs with unifix cubes to create multiplication and division problems with a given dividend/product, worked individually to create a square using pentaminoes, and constructed and figured the volume of three-dimensional cubes. In addition, all three third-grade teachers described science projects in which the students selected topics of interest and researched them individually or in groups.

During the fourth-grade year, classroom observations and teacher interviews suggested that the vast majority of time was spent teaching basic factual knowledge or process skills. Factual questioning was the norm, with the occasional question that challenged students to think. Seldom were students allotted an extended period of time (i.e., more than 5 to 10 minutes) to solve a thinking-type problem (as opposed to a computational problem) in any subject area. Emphasis on facts was especially prominent in English, spelling, mathematics, and science, and less so in reading and social studies. The focus in math was on computational and process skills. Fourth-grade students did attend a weekly science lab, where they engaged in activities or experiments. Two observations of the science lab, however, found activities more focused on having students follow directions to complete a process than on developing conceptual understanding.

Time limitations did not allow researchers to conduct many classroom observations during the fifth-grade year. However, teachers, parents, and students reported that the KES fifth-grade teachers used a combination of basic skills and higher-order instruction during that year.

## Assessment Practices

KES teachers made some attempts to implement authentic assessment practices, although this occurred mostly in the primary grades and was not usually linked to assessing student progress toward KERA goals. Primary teachers reported in 1997 that they had recorded anecdotal information on student progress. That same year, each of the three third-grade teachers also reported using rubrics, some of which were designed by students, to evaluate student projects. Primary teachers used different components of the KELP for a time, but the full instrument was never adopted schoolwide and was seldom used by 1997.

Fourth- and fifth-grade teachers at KES employed traditional forms of assessment, typically multiple-choice-type tests that accompanied the textbook series, often with open-ended response questions attached. Teachers recorded student grades or scores in grade books and sent traditional report cards home. There was no method used across grade levels for monitoring individual student progress toward KERA goals or any other common set of skills and expectations.

Like teachers in other schools studied, KES teachers prepared students for the KIRIS assessments with open-ended response questions and on-demand writing tasks in their classrooms. By 1997-98 these KIRIS-like assessment tasks had been relatively well integrated into the instructional program. Just prior to administering the KIRIS assessments in the spring, however, KES set aside one hour per day for three consecutive days to engage fourth- and fifth-grade students in practicing the KIRIS-like assessment tasks.

## School-Level Decision Making

KES and other Lamont County schools made key decisions about curriculum and instruction at the school level, but KES differed from OCES in that it frequently used its SBDM council as the vehicle for making such decisions. From the time of its inception in 1993-94, KES's SBDM council was a major decision maker at the school, as revealed by observations of council meetings during the 1991-95 phase of research and by ongoing interviews with principals, teachers, and parents. In the fall of 1997 newly hired principal Catherine Carothers, who had left the principalship of another Lamont County school to come to KES, commented on SBDM at KES:

> Definitely, the council plays a role at this school. They have a reputation. It has been known that the Kessinger council took an

> active role, even before [I] or [previous principal] Laura Bolin came here. Since the beginning, they were a site-based council, and they took a very active part. It is not just a token gesture to have SBDM here. And the council is still a major decision maker. We worked long hours on some of the policies, and there is a lot of input from the council.

The KES SBDM council used its committees to help make decisions about curriculum and instruction in the areas of the primary program structure, textbook selection, and school improvement planning. A review of council minutes revealed that the percentage of meetings in which the council discussed issues related to curriculum and instruction increased annually (with a marked drop-off during Carothers' first year at the school), from about 25 percent of meetings in 1993-94 to nearly 90 percent in 1998-99.

Observations of meetings revealed that parent representatives on the SBDM council typically were vocal and assertive. In addition, KES teachers appeared unusually receptive to parent input, although the various principals differed in this respect. In 1994-95 four to eight parents/community members served on each committee, and some committees had more parent/community members than teachers. Carothers reported in 1997-98 that parents were represented on all committees and parent council member Leslie Matthews reported in 1998-99 that the faculty welcomed substantial parent input into decisions.

Parents also were active in other areas of school functioning and were less inhibited in sharing their concerns with educators than were parents in other schools studied. For instance, accustomed to KES's open-door policy, several parents protested when new principal Laura Bolin tried to restrict parent access to the building after the tardy bell had rung. Parents and community members also protested when Bolin tried to end the long-standing tradition of KES students trick-or-treating around the community at Halloween and eventually persuaded her to reverse her position. Some parents called the state department and arranged for someone to visit the school and train the parents on implementing a SBDM council.

KES was one of the few schools with an active parent-teacher organization when the study began. Carothers reported in 1998-99 that the parent-teacher organization held fund-raisers, worked on purchasing a school marquee, and hosted the fall festival. She also reported that many parents and grandparents regularly visited the school to eat lunch with their children.

Parent volunteering was commonplace at KES. In 1996-97 then-principal Bolin reported 22 regular parent volunteers. Most of the lower-primary teachers reported at least one regular parent volunteer and said they generally received a good response when requesting assistance from parents. In 1997-98 parents held work sessions once a month to prepare materials for teachers, with one session held in the morning and another in the evening. The parents interviewed felt universally welcome at the school. Teachers and the principal reported that parents always turned out for special programs and when help was requested. One parent remarked:

> I think [the] relations with parents are wonderful. I have not had one teacher yet to say one thing about me being there, and I was there with [my son] last year volunteering. I think they are wonderful to the parents. I think they appreciate the parents. I wouldn't go if I didn't feel that.

Parent involvement, particularly in the policy arena, meant that many decisions and practices had to be negotiated between parents and educators. KES educators did not seem to resent this situation, and parents were generally quite satisfied with the school. But KES educators did have to balance pressure from the state-mandated reform with parent desires, as evidenced most clearly by the struggle to implement the primary program. Parents were highly frustrated with the many changes in the primary grades in the early years of implementation. They eventually supported teachers on the SBDM council who voted to return to single-age grouping in the primary grades.

## The Primary Program

Erratic implementation of the primary program at KES was one of the most perplexing situations observed during the study because all but one or two primary teachers had supported the basic tenets of the primary program, particularly its emphasis on developmentally appropriate practices and continuous progress. Yet, a few dissenters were vocal and articulate and reportedly biased parent members of the SBDM council against the multiage concept.

Implementation problems occurred from the beginning, when primary teachers could not agree on how to group students. They settled this temporarily by implementing a dual configuration in which half the teachers had dual-age classrooms and the other half had K-3 groupings. Teaming quickly broke down in both cases because teachers did not have common planning time and continued to differ on how to implement the program. In 1993-94 teachers struggled with the issue of whether kindergarten students should be included in the primary program. Students were shifted among teachers several times as teachers struggled to arrive at consensus on this issue, upsetting many parents and students in the process. At the conclusion of the year, principal Lew Gunther resigned, and the school embarked on a four-year period of ever-changing leadership.

Successive principals tried to channel the program in an appropriate direction but did not stay long enough to help solve the problems, so teachers essentially fought the battle anew each year. And even though most teachers supported the primary program concept, many of the components of the primary program were not being implemented. An AEL researcher probed for the answer to this apparent incongruity in a 1997 interview with primary teacher Mary Ash:

> **Ash:** The conflicts over primary persist. We are not to a point that everyone is comfortable with what we are doing.
>
> **Researcher Kannapel:** Can you say how many teachers support the program and how many oppose it?
>
> **Ash** (after thinking through the list of teachers)**:** As far as really being against it, only one primary teacher is absolutely against it.
>
> **Kannapel:** Then why do you have single-age classrooms?
>
> **Ash:** Our SBDM committee had a fifth-grade teacher who proposed the single-year grouping to the council. There was also a fourth-grade teacher on the council who did not like [multiage groups]. [Primary teacher] Ida Hamilton did not vote to go single-age. Principal Cara Sadler from last year, I can't remember if she voted—I think she just let the teachers and

parents make the decision. The parent support was there for single-age. . . . Maybe I contradicted myself in saying that we are against the primary program, now that I have counted who is for and who is against. . . .

**Kannapel:** All the changes in principals might make the problem worse.

**Ash:** Exactly right.

**Kannapel:** Do you think the school is on the road to getting itself together?

**Ash:** If we can maintain leadership, I think we will be on the right road. If we don't keep some continuity in the principal's office, I don't think we will be on the right road.

**Kannapel:** Is there anything more you would like to say?

**Ash:** I feel I have been negative, and I don't feel that way. We have some problems we need to work out. As a whole, the teachers want to do what is best for the students, but we have some differences in philosophy. The classroom teachers don't have enough of a voice in what is happening because of the strong personalities.

**Kannapel:** It sounds like some of them do. . . .

**Ash:** It is the constant changing in leadership and leaders coming in who don't know primary. They sort of let the strong personalities come in and convince them of the way it should go. And I just don't fight it.

**Kannapel:** And other supporters of the primary are not speaking out either?

**Ash:** I guess that is it. I guess that is it. We just talk about how it is going and say it is too bad. I think the reason I don't get in there and fight it is I have fought for causes before and lost. And I think children can learn in all situations and it boils down to the teacher. If the teacher is dedicated to learning, [the students] will learn no matter what the arrangement. They will have success. I just don't think we have the optimum situation. We could do

> better. I have learned through the years of teaching to let the powers-that-be go at it, and I will take my group of students and do what I can for them.
>
> **Kannapel:** But the powers-that-be are teachers.
>
> **Ash:** Yes, but I have only so much energy and resources, and I want to put that on the kids.

Most of the KES primary teachers supported the primary program and, like Mary Ash, continued to implement it to the best of their ability even while the turmoil raged. Therefore, primary classrooms were active and interesting, and teachers attended to individual student learning. Primary students typically were grouped in dual-age or multiage classrooms, except for the 1996-97 school year, when the SBDM council voted to return to single-age classrooms. These multiage settings offered opportunities for students to work at a variety of levels. Primary teachers, as a group, seemed to have some sense of allowing students to progress at their own rates. Of eight primary teachers interviewed in 1997, six exchanged students with other teachers during language arts and math in an attempt to have students working at the appropriate level. Within their own classrooms, teachers accommodated different needs and ability levels through individualized spelling lists and tests, a multiskills reading series, and multiple trade books, which allowed students to choose books at their own ability and interest levels.

In spite of these innovations at the primary level, KES teachers shared the same difficulties as teachers at other schools studied in finding the time to implement the primary program and in linking the primary program to the intermediate grades. In 1996, a kindergarten teacher remarked on the time problem:

> One of the negatives [of KERA] is the massive amount of paperwork. Anecdotal records are just one part of that. The KELP [and] not having time specified for parent interviews . . . is done on your own time. That is an extreme amount expected. We are using the KELP here in two subject areas. Even at that, it is a massive amount of work. They expect a lot from teachers. They expect us to give more than the hours we are paid for, and we're not reimbursed for that time. It would be helpful to have

> the extra pay because we are taking away from home and family to do this on our own time.

The time factor inherent in implementing continuous-progress multiage classrooms was exacerbated at KES by the lack of common planning time among teachers and the strain of trying to develop a coherent program among a group of teachers with differing personalities and philosophies. From 1991 through 1999 KES primary teachers had common planning time for only one year–the 1995-96 school year. After that, the district cut funding for the music program, leaving fewer special-areas teachers to provide planning time for teachers. Two of the most enthusiastic primary teachers team-taught for one hour a day during 1996-97 and had to create ways to meet, as explained by KES teacher Kendra Osborne:

> **Osborne:** [The hardest part of teaming] is finding time to plan. The first time we planned together, we stayed after school, went home, and ate supper (we know each other's families so our families ate together), then we came back and stayed until 11:30, planning two weeks of three-hour sessions. . . . When [the principal] was not here, we popped in a movie. I'm sorry, but yes, we popped in a movie and the aide watched the kids, because we had something every afternoon that week. We had SBDM on Monday, professional development on Tuesday, ESS on Wednesday; Thursday, I had an academic team competition, and [I had] a meeting at the high school on Friday, so there was not time to plan. . . . We are planning tonight. Our husbands are coming to my house to watch TV, and we will plan together.
>
> **Kannapel:** If you could do anything you like with the primary program, what would you do?
>
> **Osborne:** Team-teach in the same room with the same teacher and the same children; and have more planning time during the day; and not have to live, eat and sleep this.

KES resembled OCES in the lack of connection between the primary and intermediate programs. Many exemplary practices in the KES primary program were in step with helping students learn in their own ways and at their own rates; these practices engaged students actively in the instructional program. Yet, the strategies were not tied to KERA goals and expectations and did not appear directly linked to preparing students for the KIRIS assessments. Intermediate teachers, meanwhile, were focused on test content and format with their students but did little to adapt instructional approaches to individual student needs and learning styles. There was little long-term and substantive communication between primary and intermediate teachers; primary teachers said intermediate teachers used a traditional approach and did not understand what the primary program philosophy was all about, while intermediate teachers reported that primary teachers were not in tune with what fourth graders needed to know to do well on the KIRIS assessments. Fourth-grade teacher Katie Blackstone commented:

> The primary teachers are not preparing students or using the curriculum necessary for them to succeed in fourth grade. They still have a lot of freedom of choice in content and materials—I understand that is part of KERA—but we are finding so much inconsistency in what kids have covered in *Core Content*. The writing program is not what we'd like to see to support fourth-grade writing.

Blackstone explained that the basics still must be emphasized in the primary grades, even though the KERA goals and the KIRIS assessments also stress thinking and problem-solving skills. Her comments were similar to those heard from teachers across the schools studied:

> Students can't successfully perform on higher levels of thinking unless they have the basics. So if [primary teachers would] build a foundation of basics and follow [up in] a unit with an open-response question and a performance event, those things would prepare them for analytical thinking that they can do once they get to fourth grade. I truly believe that that was one of our failures, too, when we implemented the primary program and KERA. We neglected the [basics]. For example, I coordinate the extended school program, and [during] my first year as fourth-grade teacher, we had a big cry from parents about their fourth-graders not knowing multiplication tables. We found out as fourth-grade teachers that the parents were right. Students didn't know multiplication tables. They knew how to work it out, they

> knew how to work with manipulatives . . . they understood the process, but there was no memory of factual information. So extended school had to address that issue, and we had morning classes for some of our fourth graders that was just drill and practice on the multiplication tables. I just feel like there is a lot of content that children just have to know and have to be able to recall instantly, and then demonstrate that knowledge. . . . But now I know that there are a lot of strategies out there where it is taught just the opposite. You start with your manipulatives, and [students] work with that until they know what they are doing, and then you show them the concrete facts: "This is the information that you need to know, and this is what you have found out in your learning." I prefer the opposite with primary children.

## Summary of Reform at Kessinger

### Extent of Reform Implementation

KES achieved remarkable success in the face of major obstacles. Teachers created innovative classrooms that emphasized writing and that focused on the *Core Content for Assessment.* Primary teachers were especially attuned to using varied instructional practices. Scores rose on state accountability indexes and nationally normed tests. Parents reported that the school had welcomed them and that teachers had challenged students to higher levels than ever before. The SBDM council at KES made key decisions about curriculum and instruction, with a relatively high level of parent input.

However, KES was hindered by the lack of a clearly articulated mission to guide its KERA implementation efforts. The faculty was dedicated to students and their families, but, unlike OCES teachers, they did not articulate a strong belief in the students' abilities to learn at high levels. Without a unified focus, teachers often relied on the KIRIS assessment program for guidance in the area of curriculum and instruction. As a result, their assessment practices were designed primarily to prepare students for the KIRIS assessments rather than to track individual student progress toward specified learning goals. Teachers in the accountability grades placed an emphasis on assessed subjects, a phenomenon also noted at OCES. Also, as at OCES, KES teachers reported having difficulty combining basic skills instruction with activities to develop students' higher-order thinking and coordinating curriculum revisions in the primary and intermediate grades.

## Conditions for Reform

Two key conditions emerge as critical in KES's attempts at implementing KERA: readiness for education reform (influenced by the local culture) and leadership. The vast majority of teachers were poised to take advantage of KERA because they believed in meeting the needs of individual students and engaging them actively in instruction. But, unlike the situation in Orange County, where impoverished conditions and negative Appalachian stereotypes motivated teachers to seek greater educational opportunities for their students, Lamont County did not feel a strong need for curricular and instructional reform when KERA was enacted. Most educators and parents in the county wanted to improve physical conditions and financial resources for their school district but made no real push to change what was happening in the classrooms.

Still, most KES teachers and parents interviewed did not resist KERA, and supported many of its basic tenets. Strong leadership at the district and school levels might have channeled the considerable energy at KES. However, the district played only a minimal role in guiding KERA implementation efforts, partly because of frequent turnover and lack of resources. Furthermore, the lack of a strongly felt need for reform by the district leadership played a role. At the building level, the revolving door on the principal's office exacerbated existing tensions among the faculty, making it nearly impossible to bring teachers together around a unified vision. When vacancies occurred, the KES SBDM council tried to hire principals who would move the school forward with KERA implementation, but qualified applicants within the small rural district were difficult to locate. The SBDM council often had to look outside the district but soon learned that most outsiders either did not want to move to Lamont County or would not stay long.

Another condition that hampered KERA implementation was lack of funding. While increased funding under KERA provided teachers with more materials than they had ever had, resources were still insufficient to provide teachers with the kind of ongoing professional development and technical assistance they needed to make major changes. In addition, lack of funding for administrative and technology support staff and for assistant principals and counselors in elementary schools forced teachers to depend largely on state guidelines and their own ingenuity in implementing KERA.

The lack of strong leadership likely accounts for why KES teachers relied much more heavily on state mandates and the KIRIS assessments to guide their efforts than did teachers at OCES. At OCES, a strong central vision had combined with KERA to give the teachers direction. At KES, KERA and associated policy motivated teachers to devote a great deal of time to writing instruction, align their curriculum to assessment content, and implement varied instructional practices to meet KERA goals. Their efforts, however, were more fragmented than at OCES.

As at OCES, some aspects of state policy hindered KERA implementation: the lack of linkage between the primary program and other KERA initiatives, a strong focus of the *Core Content for Assessment* and the KIRIS assessments on KERA goals 1 and 2, and a high-stakes accountability program that limited teachers' willingness to risk implementing new instructional practices.

The amount of time required for KERA implementation emerged as a determining factor, as it had at OCES. The time needed to engage in professional development, plan strategies, locate resources, and implement new strategies in the classroom and participate in SBDM took a toll on KES teachers. In addition, the ongoing professional struggles among the teachers further depleted their energy. As a result, by the fall of 1999, when KES teachers participated in a research briefing, they expressed they were exhausted, frustrated, and unsure what they might do or where they might find the energy to keep the school moving forward.

# CHAPTER 5

# Dyersburg Elementary School

## The Context

### The Community

Dyersburg Elementary School* (DES) is located in the small community of Dyersburg, nestled in a scenic river valley along the Vanderbilt County line in central Kentucky. Vanderbilt is a small agricultural county with a population of about 10,000. The county has three major towns: the county seat of Rockview is the largest by far with a population of about 2,800; Leestown and Vickerstown each have about 200 residents. The very small community of Dyersburg is not even listed in the 1990 census; its population is counted as part of the Rockview division. All towns are within about a 10-minute drive of one another.

Agriculture provides the single largest source of income in the county, followed by the school system. Major sources of farm income are burley tobacco and beef and dairy cattle. Two of the state's largest cities are located within about an hour's drive, and many Vanderbilt County residents commute to work.

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*Names of people and places have been changed to protect anonymity.

## The District

The Vanderbilt County school district has a student enrollment of about 1,800. Until 1999-2000, the district had four elementary schools and a junior/senior high school. Leestown and Vickerstown elementary schools merged that year to form North Vanderbilt Elementary School, reducing the number of elementary schools to three. Vanderbilt County Elementary, located in the county seat, serves about 500 students in grades K-6; North Vanderbilt Elementary also serves about 500 students in grades K-8; and Vanderbilt County High School enrolls about 700 students in grades 7-12. Although enrollment at DES (just under 100 in 1999) has long been lower than that of either of the two schools that merged, strong community opposition to its closure has kept it in operation.

The county school district has been generally supportive of KERA. District staff described their district as generally forward-looking even before KERA. Under the long-time leadership of superintendent Ken Vance, who retired at the end of the 1996-97 school year, the district had engaged in a form of shared decision making prior to KERA. The principals made many decisions that affected their schools and, in turn, looked to teachers for input. School district and community sources alike reported that staff relations in the district and between the district and the community have been historically amiable. The district administration prided itself on these positive relations and took on the implementation of KERA with the same positive attitude.

As in other districts, enthusiasm for KERA was fueled initially by the large influx of state funds, supplemented by increased local revenue from a sizeable tax increase initiated by the school board, which wanted to take advantage of KERA matching funds. Local and state revenue per pupil in Vanderbilt County increased by about 75 percent between 1989-90 and 1997-98: from about $2,800 to about $4,900 per pupil (Office of Education Accountability, 1999). Because Vance's sound fiscal management had given the district a sizeable contingency fund prior to KERA, the district took advantage of the new money and invested substantial dollars in technology and teacher professional development. Almost immediately after KERA was enacted, each elementary classroom in Vanderbilt County was outfitted with five computers, and the high school built two computer labs.

As in Lamont County, only a few employees staffed the Vanderbilt

County central office, and the district's four administrators had multiple responsibilities. Vanderbilt County differed from Lamont, however, in that the administrative staff was very stable. Three of the administrators had held the same positions for several years and continued to do so under KERA. Vacancies in the central office occurred when the three long-time administrators retired in the mid 1990s. They were replaced by building-level administrators who had been in the district for many years, thus maintaining continuity.

The Vanderbilt County administration was relatively proactive in preparing teachers to implement KERA; the influx of KERA money funded multiple opportunities for professional development. The district's stance toward KERA fell somewhere between the enthusiastic approach of Orange County and the neutral style of Lamont County. Vanderbilt County administrators generally expressed support for KERA tenets but, in keeping with Vance's leadership style, allowed each school to determine its own instructional program. Therefore, the level of KERA implementation depended largely on each school principal and faculty. Vanderbilt County Elementary (VCES), led by a new principal who supported KERA, was initially the most innovative. Leestown and Vickerstown tried several new programs and approaches but did not implement KERA as vigorously as VCES. DES changed the least. DES head teacher Hank Porter described in 1996 the approach of the district administration:

> Our administration has been fully supportive of what has gone on. They have passed information along, passed expertise that they gained and said, "Here it is, use this in the way you think is best." That puts a little more burden on the building principal, the committees, or whatever you have. But when you're deciding how to sail your own ship, you tend to take a harder look at the course you want to take. . . . [There has been] absolutely no pressure at all, and . . . [that approach has led to] different directions in each building as far as KERA is concerned.

## The School

County residents describe Dyersburg as a community of hard-working, traditional families who want to see their children do well in school. Many residents are Catholic (typical of central Kentucky), and the school building itself is a former church school that the district rents from the church. The school has performed historically well on standardized tests and earned a reputation for high performance and a rigorous program of academics and student discipline. Staff and parents of other Vanderbilt County schools often attributed DES's high test performance to its "select" students. At a parent focus group meeting in 1994, when a Dyersburg parent spoke proudly of the school's recent high KIRIS performance, a parent from another school responded, "You [have] a small school. You've got a select bunch of kids. [Scores] are going to be higher for schools in a small, close-knit, family-oriented community like Dyersburg." A high school teacher described DES as a "publicly funded private school."

The DES school building contains four large classrooms, each housing two grades; a cafeteria; a small library; and a small office. A gymnasium is adjacent to the building. The cafeteria was expanded in 1998, and the school is talking with the church about expanding the gymnasium to be used also as a community center.

DES houses just under 100 students. Over the course of the study, the school consistently served students in grades 1-8 and occasionally served kindergarten students, although these students were sent to nearby VCES in some years. Until 1999, DES was the only school in the county completely accessible to the handicapped; however, special education students from the Dyersburg district were bused to VCES presumably because DES had too few such students to warrant its own special education teacher. The percentage of students qualifying for free or reduced-price lunch at DES fluctuated over the years of the study (typical of such a small school): about 30 percent in both 1991-92 and 1992-93, just under 50 percent in 1993-94, less than 30 percent in 1996-97, and about 40 percent in 1999-2000.

The DES faculty and staff reported that increased funding under KERA helped the school meet all of its material needs. The school's instructional allocation was divided equally among the school's four teachers to be spent at their discretion. They purchased a new copier for the school, the Accelerated Reader computer program, textbooks, literature books, workbooks, art supplies, and math manipulatives.

When the study began in 1990, Porter (who taught grades 7 and 8), third/fourth-grade teacher Velma Lawson, and primary teacher Anna Beth Phillips had each been at the school for at least 15 years. Fifth/sixth-grade teacher Serena Jones had been at DES just under 10 years. Staff and faculty employment remained very stable until the 1996-97 school year.

The DES head teacher, Porter, was not formally granted time for administrative duties; however, throughout his long tenure, he found time for these responsibilities by having secretary and jack-of-all-trades Kitty Browning cover his classroom or by leaving the students on their own for short periods. Porter's absence from the classroom did not create problems because of the strict discipline characteristic of the school. Teachers often left their classrooms for brief periods, during which times students typically worked dutifully until the teachers returned.

The staff and faculty appeared to get along very well under Porter's leadership. The teachers gathered in the office each morning from 8:00 until 8:15 to drink coffee and chat. They engaged in frequent good-humored ribbing and seemed comfortable in one another's presence but were seldom heard discussing professional issues.

The sense of camaraderie under Porter's leadership did not extend to parents. Parents reported on several occasions that they did not feel welcome at the school. Porter confirmed during a 1996 interview that he was somewhat wary of parent involvement:

> I like parent involvement but you have to be careful. Parents are not trained, they don't realize when they come in some of the things that they carry out. That is my biggest concern is the message that they carry back to the community. . . . I am a [throwback] to the old times. I would rather do it myself than take the time to explain to someone else how to do it. As far as parents being involved with what their students do, there is a lot of that here. Parents take part in programs and have good school spirit. To be honest, I set up a volunteer program down here once and was told I had to take anyone, so I ditched the program because I had been down that street before. If we are not careful, we get volunteers with an axe to grind. As far as any type of activities or class trips, we have parents volunteer to help on trips, and I could pick up the phone and get any number of volunteers I need for anything, but it is not [part of our] daily process.

Staff changes occurred at the end of the 1995-96 school year, when third/fourth-grade teacher Lawson retired. At that time, Porter shuffled the teachers, moving Anna Phillips to the fifth/sixth-grade level. He switched fifth/sixth-grade teacher Serena Jones to the third/fourth-grade class and hired a new teacher from outside the district, Nancy Dickerson, to teach first/second-grade. Dickerson retired the following year. At the end of the 1998-99 school year, Porter took a central office position and Ben Zoeller, a middle school math teacher from Vanderbilt County High School, became the new Dyersburg head teacher.

Zoeller's leadership style was more formal and deliberate than Porter's. Whereas Porter spent a good deal of time in the office and in other "public" areas of the school, Zoeller preferred to stay in the classroom as much as possible. While classroom doors were previously left open, Zoeller required all teachers to keep their classroom doors closed. He also required that all teachers accompany their own students to the playground during recess. Previously, teachers had rotated this responsibility, with one teacher supervising all students each day. This gave the other teachers a short planning period. One teacher reported that under Zoeller, formal teacher evaluations were conducted for the first time in 12 years.

## Implementation and Effects of Reform at Dyersburg: Helping *All* Students Achieve

### Student Achievement and Parent Satisfaction

**Assessment scores.** Prior to KERA, DES students had the highest achievement test scores in the district, a pattern that continued under KERA. The school's 1992 KIRIS accountability index baseline, representing a combination of fourth- and eighth-grade accountability scores, was about 40. In 1994, the school earned the top level of rewards with an accountability index in the mid 50s. DES earned rewards in 1996 but surpassed its threshold by only $1\,{}^{1}/_{2}$ points with an accountability index in the upper 50s. This accountability index was the highest among Vanderbilt County schools in both absolute terms and in terms of improvement. DES's KIRIS accountability index dropped to about 50 in 1998, falling short of its improvement goal and placing the school in "decline" on the state accountability system. For the first year of the new CATS system, DES scored in the mid 60s.

DES students have performed well on the Comprehensive Test of Basic Skills (CTBS), although there was some fluctuation. CTBS national percentile scores for third graders dropped from 60 in 1997 to the mid 30s in 1998 and back up to about 70 in 1999. Sixth graders scored national percentiles near the 80 mark in both 1997 and 1998 but dropped to about 70 in 1999. Fewer than 15 students took the test each year, making mean percentile score fluctuations likely from year to year.

**Parent satisfaction.** Parent satisfaction with student learning at DES appeared high. Parents fought for years to keep the school open. When a district facilities plan in the early 1990s called for closing DES as well as merging Leestown and Vickerstown, DES—the smallest school to be affected—had the largest turnout at public hearings. This response, coupled with consistently high performance on assessments of achievement, ended all public discussion of closing the school.

During the 1991-95 phase of research, several parents reported they strongly supported a community school and believed their children were receiving a good education at DES, even though they would have preferred a more welcoming atmosphere. One parent explained that parents seldom complained because they were afraid of losing the school. In 1998 and again in 1999, parents of the two target students in the class of 2006 reported that their children were learning as much or more than they had expected. They appreciated the small school atmosphere, where their children received individualized attention. In addition, the parents reported that the teachers pushed students to achieve at high levels.

## Beliefs and Behaviors Concerning Student Capabilities

DES, historically and under KERA, offered a traditional, relatively rigorous education with an emphasis on discipline. This approach encouraged high achievement from all students, and the predominantly White, working-class, and middle-class students have responded with high performance. However, when compared to OCES teachers, who were accustomed to working with large numbers of poor children, DES teachers were less confident that students from certain backgrounds could do well in school. Third/fourth-grade teacher

Serena Jones explained:

> All children can achieve but they don't come to school with the best of circumstances. A child who struggles just to get to school will struggle to do well in school. The child who comes from a loving home with caring parents will have an easier time.

Head teacher Hank Porter commented on helping students with portfolios: "If a kid gives you one novice piece, the rest will also be novice."

Interview data suggest that the expectations and perceptions of students' capabilities held by teachers Jones and Phillips, both of whom taught the class of 2006, had an impact on their instructional decisions. Both teachers described the class of 2006 as an immature group. Even though the students were in split-grade classrooms, Jones and Phillips reported that the students were unable to work with older students because of immaturity and low skill levels. During the 1996-97 school year, when the class of 2006 was in the third grade, Jones separated third from fourth graders for science, social studies, reading, and math. When the class of 2006 reached the fifth grade, Phillips said that she tried peer tutoring but that the students did more playing than working due to their immaturity. She also reported doing only every other experiment from the science textbook because the students lacked the necessary maturity to complete the work in a timely manner independently or in small groups.

Chapter 3 notes that the OCES faculty used two KERA support programs—family resource centers and extended school services—to help all students achieve. DES did not establish a family resource center because they have not always had the required 20 percent of students qualifying for free lunch. They implemented the extended school services (ESS) program, however, in ways that fit very well with the school's traditional approach. The four teachers rotated responsibility for operating the ESS program; three teachers would stay after school at any given time to provide individual assistance to students in one large classroom. Phillips attributed the school's success on KIRIS, in part, to the one-on-one assistance given to slower learners in the ESS program. The school did not tie the ESS program to helping students progress toward Kentucky's learning goals and academic expectations, however. Throughout the 1990s the DES ESS program operated on a homework model; students worked on assignments from their regular teachers. Teacher Jones reported in 1994 that ESS was not part of an overall plan for improving KIRIS scores but was designed to keep students' grades up. Even without a link to KERA learning goals, the small size of the school meant that teachers typically worked with their own students and that all teachers had a good sense of what each student needed to be working on. In 1999-2000 head teacher Zoeller reported that one of the two days per week of ESS was set aside to teach students computer skills and focus on arts and humanities topics. He also said that ESS was used for portfolio development in the spring as the portfolio deadline approached but that portfolio development was not a regular part of the ESS program.

To summarize, DES did not have a schoolwide philosophy of high achievement similar to OCES, but the faculty held students to high academic and disciplinary standards, almost demanding, rather than encouraging, students to do well. The students that DES served responded well to this pressure, backed by parents who made sure their children did well in school. At the same time, the faculty expressed some doubt about the capabilities of students who lacked this kind of support, and there was little evidence that instructional methods had been altered to fit varied learning styles. Instead, the school held firmly to its historically traditional approach to instruction and discipline throughout the study period, and most students continued to respond with relatively high performance.

## Curriculum, Instruction, and Assessment Practices

### Professional Development

As noted in the district context section, the Vanderbilt County school district provided resources beyond state professional development money to prepare teachers to implement KERA. Teacher Phillips, who taught most DES primary students in the early years of reform, reported she had received more professional development than she could effectively absorb. In 1991-92, for instance, she received five full days of professional development in a hands-on math program, followed by six 3-hour follow-up sessions during the school year. She also attended a "primary institute" one day per month at a nearby university and was trained to use both the Write to Read and Write to Write computer programs. In 1992-93 she received five full days of professional development in instructional uses of technology and participated in primary program professional development provided by the school district. Teachers at the intermediate and upper-grade levels received less professional development than Phillips but still participated in a substantial amount of training in technology, cooperative learning, and strategies for teaching writing and portfolio development.

## Curriculum and Instruction

Among the six schools studied, DES has remained the most traditional in its approach to academics and discipline. The high performance of its students on both standardized and KIRIS assessments reinforces the continuation of this approach. Head teacher Porter explained that when KERA was initially implemented, many believed basic skills should be shelved. However, DES decided to continue emphasizing basics until someone could demonstrate that this was a mistake. This did not happen, so they never deviated from their customary practices.

Even so, KIRIS accountability system and primary program mandates did influence curriculum and instruction at DES. The evidence of this is that the changes at DES were similar to those observed at OCES and KES, although the lack of a felt need for change kept changes to a minimum. Specific curriculum and assessment practices at DES are described below.

**Focus on writing.** Like other schools in the study, DES emphasized writing in response to the requirements of KIRIS assessments. Also like other schools, the school emphasized writing to a greater degree in the fourth grade, when students were required to complete a writing portfolio and open-ended response questions for the KIRIS assessments. Jones engaged third- and fourth-grade students in frequent writing activities. During the first semester of each year, students responded to different writing prompts each day. After the Christmas break, fourth-grade students began expanding these pieces for inclusion in the writing portfolio. Jones reported that third graders were required to write about a half-page each day but revised a writing selection only about once a month. Students at both grade levels regularly wrote book reports on assigned books.

When the class of 2006 reached fifth grade, Phillips reported they wrote letters; personal narratives; and critiques of books, movies, video games, restaurants, and so forth. She also noted that they wrote summaries for social studies and summarized articles from the local newspaper and that she assigned open-ended response questions. The two target students from the class of 2006 reported much less writing in fifth than in fourth grade. Late in the fifth-grade year, one student reported writing one story, writing reports in science, and sometimes summarizing newspaper articles as a punishment for misbehaving.

Like teachers in other schools, DES teachers thought writing was overemphasized and portfolios were burdensome. Head teacher Porter and third/fourth-grade teacher Jones conceded that students' writing had improved, but the overwhelming message from teachers over the years was that portfolios were too much of a good thing and that they would abandon portfolios if given the option. Former third/fourth-grade teacher Velma Lawson said that she bore sole responsibility for fourth-grade portfolios and that she was under considerable pressure to keep scores on the rise. As in other schools, the primary source of pressure appeared to be fear of sanctions rather than the promise of cash rewards. Lawson stated she resented portfolios because they consumed much of her time. She feared students were missing out on other skills and attributed her decision to retire to the stress created by KERA, in general, and portfolios, in particular:

> I've had to cut out some of the curriculum that I used to teach due to the fact that there is so much writing now. We have not had science and social studies to the extent we did before. . . . I have to conference with every student. . . . How am I supposed to conference one-on-one with 1 child out of 22 when there are 21 out there that need me? That makes my stomach hurt. I'm hired for 22 [students] and I'm back here conferencing for 30 minutes with one: "Well, did you mean this?" "You have to have the punctuation." "Where did your voice stop?" This takes time. I have put in a lot of effort for seven apprentice and four proficient [students]. I feel I have neglected the rest of the students.

Porter, who was responsible for the seventh/eighth-grade portfolio, expressed a similar view: "Portfolios are not paying off given the amount of time they take to do." Jones, who assumed responsibility for fourth-grade portfolios when Lawson retired in 1996, made the most positive statement recorded among DES teachers regarding portfolios:

> Writing is much improved [under KERA]. My students write much better than they did. I taught third and fourth grade 20 years ago; there is no comparison. My own children, who are in high school, write better than I did coming out of high school, and that's wonderful. I think the writing is a plus. I just think, some places, it is stressed too much at the expense of the basics.

One reason portfolios may have seemed more burdensome at DES is that, until relatively recently, they were kept only at grades four and eight, the accountability grades. A district administrator reported in 2000, however, that students at all grade levels are now required to keep a "working folder." DES head teacher Zoeller also reported that all grade levels will keep writing portfolios in school year 2000-2001.

**Curriculum alignment.** In response to the state assessment, Vanderbilt County aligned its curriculum with the *Core Content for Assessment.* Vanderbilt County teachers worked on subject committees that examined the curriculum, the *Core Content for Assessment,* and textbooks to ensure no gaps existed among grades levels. DES teachers reported that they relied heavily on the *Core Content for Assessment,* textbooks, and experience to make decisions about what to teach. Phillips stated that new head teacher Zoeller had given teachers the message, "If it's not in the *Core Content for Assessment,* don't teach it." Jones said her third-grade curriculum focused on preparing students for the fourth-grade KIRIS assessments.

The influence of the KIRIS assessments on the fourth-grade curriculum was evident in Jones' emphases on writing (as noted above) and on science (tested in fourth grade) over social studies (tested in fifth grade). In 1998-99 Jones reported she had taught social studies in the first half of the year and science in the second half. She offered science in the spring so the information would be fresh in students' minds when they took the KIRIS assessments. She conceded, however, that she often did not get to social studies.

**Instructional practices.** All DES teachers expressed a belief that students must have basic skills before they can develop higher-order thinking. This notion, along with the school's long history of success with traditional methods, resulted in classrooms that remained relatively traditional under KERA, with the exception of the KIRIS assessment-driven changes described above and initial attempts at innovation in the primary grades. The school's traditional approach was evident in classroom organization, curriculum, and instructional strategies and materials.

Because of low enrollment, DES was composed entirely of split-grade classrooms; students in the class of 2006 (and in other classes) were differentiated by strict grade-level groups for most of their schooling. Students in the class of 2006 spent the first two years of school in a K-2 classroom under Phillips. In the class's third year of schooling, kindergarten students were moved to VCES, leaving the class of 2006 in a first/second-grade classroom taught by Phillips. Interviews with her and some primary students during that time period revealed that most subjects were taught in grade-level groups with no crossover. Exceptions were calendar, story, and theme activities, which were done with the entire class. During third, fourth, and fifth grades, Jones and Phillips generally gave students a sheaf of worksheets to occupy them while the teacher worked with the grade-level groups separately.

The exception to traditional approaches occurred in the early years of the primary program; Phillips implemented some new strategies in response to primary program mandates and related professional development she had received. For example, she arranged her classroom in desk clusters and set up learning centers for kindergarten students; first and second graders in her room were not allowed to use centers, however. She supplemented the math textbook with a hands-on program and the basal reader with a whole-language program. She also reported emphasizing phonics less and using more authentic literature in the classroom.

By the time the class of 2006 entered the third grade, some of the primary program practices had been abandoned, and the traditional program that had been maintained in the intermediate and upper grades continued. Both Jones and Phillips relied heavily on textbooks, workbooks, and worksheets. Reading instruction focused on recall of details, but some thinking questions directed students to relate the reading to their own experiences. Math instruction was based on a textbook supplemented by worksheets. The emphasis was on basic facts and computation rather than problem solving or higher-order thinking skills. There was little evidence of subject integration at DES, although both Jones and Phillips expressed support for the practice.

Curriculum and instruction changed little under Zoeller's administration. He also believed that basic skills must come before higher-order thinking but that there is a place for both. He expressed a desire to encourage DES teachers slowly to vary their instructional approaches rather than try to force change.

In the early years of KERA, DES teachers reported (as did teachers in other schools studied) that implementation of KERA had taken more time than they had to give. The time problem was especially acute for primary teacher Phillips and for teachers Lawson and Porter, who were responsible for portfolio development. By 1996-97, DES had largely returned to practices that were comfortable for the teachers, which reduced the stress level considerably. During 1996 Porter expressed growing support for KERA but also believed DES had done well on the KIRIS assessments because it had retained proven practices:

> You can go to two extremes. You can put all your textbooks on the shelf and teach hands-on and manipulatives and experiences and this and that, at one extreme. Or you can teach just like you've always taught and forget KERA. Well, what we have chosen to do here is kind of ride the middle road. We're still textbook oriented, we're still factual oriented, we're still basic skills oriented, but we have implemented KERA in with what we're doing, and I would challenge anybody to look at our test scores down here and tell me we haven't been successful. . . . I am more positive now, and I think the reason for that is I was afraid when we started that we were going to be unsuccessful with what we were doing. That was a fear I had because we're basic skills oriented down here. You would have to be looking, and know what you were looking for, to find any major differences in teaching techniques now than in years past.

**Computer use.** KERA funds and solid fiscal planning at the district level increased substantially the amount of computer technology in Vanderbilt County schools. In the first two years after KERA passed, all elementary classrooms in the district had four or five computer stations. The larger schools also had computer labs, but DES kept its computers in the classroom from the beginning. In the spring of 2000 Zoeller reported that each classroom had 8 to 10 computers (although some were old and used only for word processing). In addition, three computers per classroom were wired to the Internet. The school had print stations that could be rolled from room to room and a PC link that connected computers to a television monitor. The district provided many hours of professional development in instructional technology throughout the 1990s and a technology coordinator, hired in the mid 1990s, provides technical support to teachers throughout the district.

The level of hardware, software, and technical support helped DES teachers make greater use of computers than teachers in other districts. During the 1991-95 research phase, primary students learned keyboarding skills, and both Phillips and Lawson used the Write to Read and Write to Write programs with students. However, Lawson had difficulty because of her own lack of computer expertise. Jones, who taught fifth and sixth grades during that phase, had students use computer reference software for research projects. All teachers used computer games to reward good behavior.

During the 1996-2000 phase of AEL's research, DES teachers appeared to have changed little in their approaches to instructional technology and perhaps used computers somewhat less than they had initially. It was reported that students learned keyboarding in third grade to prepare for the word processing required for portfolios. Computers were used primarily for typing portfolio entries, using the Accelerated Reader computer program, and playing computer games; however, Phillips said that a recently acquired PC link allows her to use Internet resources for arts and humanities instruction as well as other subjects. She added, though, that students are not allowed to access the Internet on their own because she feared what they might find. Phillips also reported that even the substantial amount of technology professional development that teachers had received was insufficient to help them smoothly integrate technology into the classroom. She remarked that some of the students who had attended technology camp had helped her with technical problems.

## Assessment Practices

DES's conservative instructional practices carried over into classroom assessment, although there was some experimentation with alternative assessment practices (e.g., authentic assessment) in the early years of the primary program. In the first year of primary program implementation, Phillips kept anecdotal records on individual students and collected student work samples. She and third/fourth-grade teacher Lawson also used the district primary report card, which described student skills as "satisfactory," "improving," or "unsatisfactory." Lawson complained (as did teachers in some of the other schools studied) that the assessment practices of the primary did not provide students with a necessary understanding of what they needed to do to achieve. She remarked that students did not seem to know what constituted good work; for instance, students did not realize that missing seven problems on a paper was not a good performance. She also reported that parents were unhappy with the qualitative primary progress report, because they were unsure how their children were performing. By 1997-98 the district had adopted a primary report with letter grades. Jones, who was teaching the third grade at the time, reported she had penciled in number grades next to the letter grades to give parents a clearer idea of what they meant. She also sent work home every Friday for parents to sign.

In third through sixth grades, students in the class of 2006 were assessed mostly with traditional test formats (e.g., multiple choice or true/false) although Jones and Phillips used occasional open-ended response questions on tests. Jones also reported that she used scores from the state's administration of the CTBS as one indicator of student achievement. She further stated that she expected student classroom performance to reflect their performance on the CTBS.

Both Jones and Phillips reported using assessment items released by the state from previous KIRIS assessments to help students practice answering open-ended response questions. They emphasized that students needed to learn what constituted a good answer in order to perform well on the KIRIS assessments. When students were asked about preparation for the KIRIS assessments, they reported answering open-ended response questions throughout the year but more frequently in the weeks before the test. Even so, DES apparently did not engage students in intensive test preparation activities, as some schools studied did. In the weeks prior to the test, some schools held pep rallies, offered treats for effort, and posted signs encouraging students to do their best on the KIRIS assessments. Visits to DES during this same time produced no evidence of these sorts of activities; teachers expected students to do their best at all times. Head teacher Porter did share a strategy he had used during testing to make sure students understood that expectations at test time were as high as ever. He would walk the aisles while students worked on the test, occasionally pausing to pick up answer books and silently read student responses. Porter reported that he never commented on what the students had written but that they knew he expected them to put forth their best efforts.

There was no evidence at DES of an assessment system that tracked individual student progress toward KERA goals and expectations. Teachers reported a strong sense of each student's instructional needs, which helped them maintain continuity as students progressed through the grade levels.

## School-Level Decision Making

Until 1999, Dyersburg did not have a school-based decision making (SBDM) council. The law did not require SBDM councils before 1996, and after that time, schools that had met their KIRIS goals could opt out, which DES did. DES teachers said they did not need to implement a SBDM council because Porter had allowed them to make decisions about how to run their own classrooms, as long as they upheld the school ethics of discipline, high standards, and basic skills. In addition, Jones explained that a SBDM council would be burdensome for a small school:

> The thing that [bothers us], though, is you have to have three teachers and an administrator. Well, there won't be any sharing it. You're on it forever. And we're being real selfish and we know that, but we've got too much to do.

When it was pointed out that the informal mode of decision making had left parents out of the process, both Porter and Jones expressed that teachers should make decisions about curriculum and instruction.

When DES's KIRIS scores fell in 1998, the school was required to form a SBDM council. By this time, Porter had moved to the central office and Zoeller was in his first year as head teacher. Zoeller and Phillips reported positively on the first year of the council. Zoeller said that 10 to 12 parents had responded to a letter inviting parents to serve on the council. Both Zoeller and Phillips reported that working with the parents had been enjoyable. Zoeller explained that the SBDM council had not made major decisions the first year, but it had planned to establish discipline policies and procedures because of parent complaints that teachers had been too strict with the students. At the close of the 1999-2000 school year, Zoeller reported that the council's major decision had been to establish a dress code. A follow-up phone call in the summer of 2000 revealed parent interest in the SBDM council had fallen off the second year, with only two parents expressing interest in serving.

The DES SBDM council was slow to get into issues of curriculum and instruction, but it did open the decision-making process to parents. In addition, after two years under Zoeller's administration, DES has begun to bring parents into the school through a reading tutors program and parent breakfasts. Zoeller remarked that these activities were to be the first step in actively engaging parents in the school: "I don't know that we have done a real good job bringing parents into the classrooms. . . . I think we will work on that in the future."

## The Primary Program

The Vanderbilt County central office was relatively proactive in its support for implementing the primary program. As noted previously, the district provided primary teachers with substantial professional development focused on the critical attributes mandated by the state. Teacher Phillips, who taught K-2 in those early years, took advantage of these opportunities to a greater extent than did third/fourth-grade teacher Lawson. Phillips was traditional in her beliefs and approaches yet initially implemented many more new practices associated with the primary program than did Lawson. For instance, while Phillips experimented with whole language and hands-on math programs, Lawson maintained a relatively traditional classroom, with desks in rows and students working primarily from textbooks and workbooks.

During the initial implementation of the primary program, the only complaints heard from parents were that the primary progress report did not provide sufficient information to allow them to understand how their children were performing. Parents of two randomly selected students in the class of 2006 expressed satisfaction with their children's primary experience. One parent commented:

> [My daughter] did real well in the primary. She learned a lot from other kids, from the older kids. I thought it wasn't a good idea when they first started it, but now I think it works well.

By 1994-95 both Phillips and Lawson had expressed concern that primary students were not performing at the same levels as students were prior to implementation of KERA. Phillips, a K-2 teacher, attributed this to the time required to instruct kindergarten students (who had been sent to VCES in previous years) and the decreased emphasis on the basics. Lawson reported that primary students coming to her third-grade class lacked spelling, phonics, and cursive writing skills. Both she and Phillips reported that Phillips had begun emphasizing the basics more because of these skill deficits. When asked in May 1995 how the primary program was going, head teacher Porter responded, "It's gone."

When Lawson retired in 1997, Porter moved Phillips to the fifth/sixth-grade level, hired a new primary teacher, and moved Jones to third/fourth grade in an attempt to establish more rigor in the primary grades. By the time the 1996-2000 research phase began, Jones' third/fourth-grade classroom was quite traditional. She reported that her third-grade program was focused toward preparing students for the fourth grade and was more driven by the KIRIS assessments than the primary program had been. The only observable nontraditional feature of her classroom was the arrangement of student desks in clusters.

## Summary of Reform at Dyersburg

### Extent of Reform Implementation

DES changed very little after the enactment of KERA. Teachers appreciated the funding increase and greater access to technology, but, beyond that, they changed only in response to state mandates. The teachers increased their emphasis on writing, aligned their curricula to the content of the KIRIS assessments, and taught test format in response to pressure from the KIRIS assessments. The primary teacher attempted new instructional and assessment techniques in response to primary program mandates, but the entire school backed away from the primary program when the teachers perceived that students were not learning basic skills as they had previously. Throughout the 1990s, test scores remained high on KIRIS accountability assessments and nationally normed tests of achievement. Parents expressed support for the school's academic program—although they were concerned about the lack of parent involvement in decision making. Failure to improve their KIRIS accountability index in the 1996-98 biennium led to the formation of a SBDM council, allowing for higher levels of parent participation. At the same time, a new head teacher opened the school to parents in ways that were previously absent. At the time of this writing, the impact of these changes was not apparent.

## Conditions for Reform

Many of the same conditions that influenced KERA implementation at OCES and KES came into play at DES, although the conditions operated in different ways. Four key conditions contributed to the school's resistance to change: school readiness for change, student performance, educator beliefs, and leadership.

**School readiness for change.** Unlike OCES teachers, who recognized a need for school improvement and believed KERA was facilitating their work, the DES faculty saw no need for most aspects of KERA. Historically, DES students had performed well on all measures of achievement under the school's traditional approach to academics and discipline. KERA-mandated change was viewed as an imposition, and teachers approached change with caution and resentment.

**Student performance.** KIRIS accountability indexes for the school remained relatively high and kept improving. This fact reinforced the faculty's view that their cautious approach had been warranted, particularly since other schools in the district had made more drastic changes but had not performed nearly as well on KIRIS assessments. It must be recognized, too, that the DES student body was relatively homogeneous and, as a group, responded well to traditional techniques. Therefore, the teachers were not challenged to search for new approaches to meet diverse student needs.

**Educator beliefs.** There was the unified belief among the DES faculty that an emphasis on basic skills and discipline was the key to high performance. Consistently high assessment scores and parent satisfaction with student performance reinforced this belief. When the primary teacher, for a time, backed away from the traditional "skill drill" approach and students no longer exhibited mastery of some basic skills, all teachers became alarmed and returned to techniques they had found successful for many years.

**Leadership.** Leadership by long-time head teacher Porter was essential in maintaining the school's traditional approach. He believed strongly in basics, high standards, and strict discipline. He was not proactive, as was OCES's Hamill, in promoting his philosophy, but the DES faculty understood and accepted his expectations, partly through many years of working together as a team. Porter did not discourage teachers from trying new strategies, but the teachers understood that instructional approaches should contribute to learning basic skills and discipline; if they did not, they should be abandoned.

District leadership was also important at DES. The approach in Vanderbilt County was to give schools the resources they needed to implement KERA but to let them decide for themselves how best to accomplish the task. As a result, DES teachers were free to adopt strategies that were comfortable and successful for them.

**Response to state policy.** As was true for KES and OCES, DES was influenced by state policy. Teachers expressed fear of sanctions, just as teachers elsewhere did. As reported earlier, Porter feared initially that the school's traditional approach would not work under reform. Third/fourth-grade teacher Lawson felt so much pressure to raise KIRIS assessment scores that she eventually retired. Teachers stressed writing, aligned curriculum, and taught KIRIS assessment formats to keep scores rising. When these methods proved sufficient to keep test scores rising, DES teachers saw no need to change further.

**Implementation implications.** This case raises two questions: (1) Did DES benefit from KERA in any way? and (2) Will accountability indexes continue to rise under the school's traditional approach? Regarding the first question, the school clearly benefited from new funding. It was able to purchase all the necessary instructional materials and had much greater access to technology and professional development than ever before. In addition, teachers conceded that students' writing skills had improved, and they appreciated the opportunity to offer an after-school remediation program. The eventual implementation of a SBDM council brought more parents into the school (although the presence of a new head teacher also played a role). These aspects of KERA were a clear benefit, but the changes were mostly peripheral. The core of classroom instruction changed only slightly, only temporarily, and mostly in the primary grades. For the most part, students were educated in the same way as always. Change at DES was in no way systemic.

Despite the lack of change, the school continued to have relatively high KIRIS accountability indexes and kept its accountability indexes improving until 1998. Instructional changes geared to the KIRIS assessments likely contributed to rising accountability indexes, as did teachers' high expectations and relatively consistent approach to instruction and discipline throughout the school and from one year to the next. Jones remarked in 1994 that students had continued to perform well under KERA because all teachers in the building were of a common mind, so students received no mixed signals as they moved up through the grades.

Given that the state accountability system has just changed, it is too soon to know if the school will continue to improve. The accountability indexes declined for the first time in 1998. One possible reason is the school's small enrollment; index fluctuations are more likely in small schools than in large ones. It is possible that using traditional methods while teaching the assessment formats will result eventually in a plateau in student performance as reflected on accountability indexes. It is also possible that DES teachers' traditional methods could become less successful if the school's enrollment becomes more diverse and teachers are faced with a substantial proportion of students who do not respond to traditional methods. These are empirical questions that can be answered only through further research.

## CHAPTER 6

# The View Across Elementary Schools

This report described school efforts to implement reform in terms of the key elements of systemic reform theory (Smith & O'Day, 1991): challenging goals for *all* students, system of instructional guidance (including professional development, curriculum and instruction, and assessment and accountability), and local decision making. The report also discussed Kentucky's primary program, which departs from systemic reform theory by mandating a process for change. The research was guided by four questions: To what extent and under what conditions during the decade of reform did the schools studied

1. help *all* students achieve KERA goals?
2. implement curriculum, instruction, and classroom assessment practices consistent with reform goals?
3. make key decisions about how to improve student learning?
4. implement the primary program in ways that contributed to reform goals?

This chapter summarizes data related to these questions across all six schools studied, supplemented by statewide data as appropriate. Each topical summary addresses the *extent* to which a particular reform component was implemented as intended and discusses the *conditions* that contributed to its implementation or lack thereof. The final portion of the chapter describes conditions that influenced all aspects of reform implementation—state policy, educator beliefs, district and school leadership, school culture, and teacher time.

## Helping All Students Achieve

### Test Scores

The most important indicator of KERA's success is the degree to which schools have raised the level of learning for *all* students since its implementation. The measures available include the Kentucky Instructional Results Information System (KIRIS), National Assessment of Educational Progress (NAEP), and Comprehensive Test of Basic Skills (CTBS) tests. All six elementary schools in this study increased their performance on KIRIS over the seven years that the test was in place. This trend mirrored that of elementary schools around the state, where average statewide student performance on KIRIS improved in all academic areas. The greatest gains statewide occurred in reading (from 32 to 58 on the academic index), mathematics (from 22 to 44), and science (from 18 to 37). High school students also improved their test scores considerably. Middle school students statewide had the lowest scores and improved the least, although all academic areas improved except writing, where scores remained flat (S. P. Weston, personal communication with Robert Sexton, Prichard Committee for Academic Excellence, June 15, 1999).

The meaning of improved KIRIS scores depends on the validity and reliability of the test, which have never been firmly established. A panel of national testing experts noted in 1995 that large increases on KIRIS did not correspond to equivalent gains for Kentucky students on the NAEP, ACT, or CTBS, all of which showed much smaller gains or none at all (Hambleton, et al., 1995). KIRIS is the only test, however, linked to Kentucky's academic goals and expectations—more strongly to some learning goals than to others (Nitko, 1997)—so it should be expected that schools teaching to those standards will show greater gains on KIRIS than on other tests. The case studies demonstrate that improvements are almost certainly attributable, as well, to the considerable amount of test practice in Kentucky schools.

Other achievement measures also show gains but to a lesser extent than KIRIS. The NAEP, which uses an open-ended response format similar to KIRIS and CATS, was not administered in any of the schools studied but was given to a sample of Kentucky schools during the reform period. Susan Weston's analysis (personal communication with Robert Sexton, Prichard Committee for Academic Excellence, March 19, 1999) of Kentucky NAEP scores found that fourth graders improved their reading scores from 213 to 218 between 1992 and 1998—more than nearly all other states—to exceed the national average (215) for the first time. Eighth graders exceeded the national average in reading (261) by one point in 1998, the first year eighth-grade NAEP reading scores were published by state. Fourth graders improved faster in mathematics than their counterparts in most other states, to come within two points of the national average (222), compared to a four-point gap in 1992.

Kentucky's improved NAEP scores have been questioned due to the decreasing number of Kentucky students with disabilities who took the test between 1994 and 1998. An analysis conducted by the Educational Testing Service dropped the lowest 1994 fourth-grade reading scores and compared the adjusted 1994 score to the 1998 actual score, resulting in a gain but one that was no longer statistically significant (J. Mazzeo, J. Donoghue, & C. Hombo, personal communication with P. D. Forgione, Commissioner of Education Statistics, NCES, March 12, 1999). Lauress L. Wise compared students excluded from the 1998 NAEP to similar students who had taken KIRIS in an effort to estimate statistically what the scores for the excluded students would have been had they taken the NAEP. He concluded that Kentucky's gains should not be minimized because excluding students with disabilities had only "modest" effects on the 1998 scores (Hoff, 1999).

Another test available for judging the progress of Kentucky's students under reform is the nationally normed CTBS. Using this test to measure progress is problematic, however, because the CTBS-4 was administered the year before KERA's passage but was not administered again statewide until 1997. By then, the test (now called the CTBS-5) had been newly normed, preventing a valid comparison of pre- and post-KERA results. In addition, the CTBS-5 does not measure Kentucky's academic expectations very well (Nitko, 1997).

CTBS national percentile scores for Kentucky's third-grade students increased from 50 to 52 between 1997 and 1999; sixth-grade scores remained stable at 50, and ninth-grade scores held steady at 48. Four of the six study schools witnessed greater improvements, with scores over the three years increasing from about 5 percentile points at Vanderbilt County Elementary School* (VCES) to almost 35 points at Riviera Elementary School (RES). Exceptions to this trend were two high-scoring schools: Orange County Elementary School (OCES), where third-grade scores remained steady at around 60 between 1997 and 1999 and sixth-grade scores dropped one percentile point, and Dyersburg Elementary School (DES) where sixth-grade scores dropped from about 80 to about 70 (although third-grade scores increased from about 60 to about 70).

Results from all three tests suggest that achievement for Kentucky students has improved, at least at the elementary level. Across measures, gains occurred at the elementary level in reading and math. The dramatic rise in KIRIS scores, as contrasted to other measures, is undoubtedly related to test preparation activities, including increased practice in writing, use of open-ended response questions, and teachers' focus on tested subjects and content. Such test preparation follows a familiar pattern when new tests are introduced: scores start low, rise quickly for a couple of years, level off for the next few years, then begin to drop (Hoff, 2000). But reading and math scores increased for elementary students on other measures. The fact that KIRIS scores increased more than the other tests was to be expected, given that the others did not focus on Kentucky's learning goals and academic expectations. The fact that scores showed most improvement for elementary students may indicate that changes at the primary level were moderately successful in raising student performance. Data from the 1990-95 phase of this study suggest that more KERA-motivated instructional change occurred in elementary schools in the four study districts than in middle or high schools (AEL, 1994). Only by keeping the same test in place for a period of years, and by supplementing test score data with other indicators of success, will it be possible to determine whether schools are genuinely increasing students' knowledge and skills or whether rising test scores are an artifact of test preparation.

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*Names of people and places have been changed to protect anonymity.

## Parent Satisfaction

Another measure of school success is the extent to which parents perceive that their children are being well educated. In the six study schools, more than three-fourths of 29 randomly selected parents reported in 1998-99 that their children were learning more—and at a faster rate—than they would have expected. These findings mirror statewide data. A 1999 survey conducted for the Kentucky Institute for Education Research found that a majority of public school parents believed that student learning over the past five years had improved in the areas of computer skills, writing, thinking and problem solving, reading, knowledge of basic subject matter, and mathematics computation. Further, a majority of the parents surveyed believed schools were doing a good job preparing students for college, work, self-sufficiency, basic skills, and citizenship (Kentucky Institute for Education Research, 1999).

These findings may not surprise those who follow public trend data. Annual Phi Delta Kappa/Gallup national polls of the public's attitudes toward public schools have consistently found that the public gives higher grades to local schools than to the nation's schools and that public school parents rate local schools even higher than do citizens with no children in school (Rose & Gallup, 1999). Still, given the transitional state of Kentucky schools over the past decade and the fact that schools have attempted many new practices, it is noteworthy that Kentucky public school parents have shown a high level of satisfaction with student learning.

## Helping *All* Students Achieve

To attain reform goals, schools must do more than improve average achievement. They must ensure that learning improves for *all* students. Typically, schools are more successful educating middle-class and/or White students than poor and/or minority students. Using KIRIS and CTBS as measures, the OCES case illustrates that being poor does not have to result in poor school performance. OCES had the highest percentage of at-risk students in the study yet achieved the highest KIRIS scores in recent years, demonstrated the fastest rate of improvement on KIRIS, and attained CTBS scores well above the state average and nearly as high as those of Newtown and DES, the study schools with the fewest at-risk students.

It is likely that OCES's success with its low-income population is attributable largely to the school's clearly articulated commitment to high achievement for all students. This commitment was inspired by both a district philosophy of high achievement and inclusion for all students and by a principal whose own low-income background instilled in her a mission to encourage and assist all children to succeed. Not all OCES faculty believed in student capabilities as strongly as Principal Hamill, but most were sufficiently motivated and supported by her to work as hard as they could toward helping all students achieve.

Educators at the other schools studied neither spoke as positively about their students nor displayed the same level of commitment to helping all students achieve. Newtown and DES, however, continued long-standing traditions of academic rigor under KERA, which likely contributed to their relatively high test scores on all available measures both before and during the reform period. But educators at both locations were accustomed to White, working-class, middle-class students whose families supported the school's efforts. They struggled when helping students from different backgrounds. During the reform period, both Newtown and RES experienced appreciable increases in the proportion of low-income students. Newtown principal Serena Oakley spoke of the difficulties teachers were having teaching the class of 2006:

> There are more new kids in this class—they're not all old-time [area] residents. But we're seeing more of that in all grades, anyway. Some are students with terrible backgrounds, mostly out of the subsidized housing project in town. The older faculty are having trouble adjusting to the new type of student we are serving.

The majority of teachers interviewed at the schools with the lowest KIRIS and CTBS scores, RES and VCES, stated that many of their students were not capable of high levels of achievement because of deprived backgrounds. Both schools had about 60 percent at-risk students in 1998-99, more than DES or Newtown but fewer than OCES. Both schools had relatively strong instructional leaders who supported basic reform tenets but faced veteran faculty members with entrenched beliefs and practices. In addition, one of the principals struggled to develop an interpersonal leadership style that could promote positive change; the other had not been in place long enough to make a difference. RES teacher Sue Godsey, when asked whether she believed all students could achieve at high levels, expressed a view similar to that of most others at this very small school:

> It will never happen, not at Riviera, that all will achieve at the proficient level. . . . The town and the housing have deteriorated to low-income housing. We have a few set families that will continue to live here that have good students, but then you have so many that have moved in here for the low-income housing that are not education oriented, they are not job oriented, they are welfare oriented. Their children come to school with the idea that they will stay until they can drop out. They get no help at home; you get nothing back from home; you can send all the notes you want to but unless they are getting some kinds of tangible reward, you will not get it back. Not all will achieve at the proficient level. I feel it is impossible. . . . I'm butting my head against the wall.

At VCES, about one-fourth of the students were African Americans and about 60 percent of students were eligible for free or reduced-price lunch. Educators often attributed the school's erratic test performance to the population of students served. In explaining the school's low KIRIS scores in 1994, several VCES educators commented that their student body was less advantaged than at other district schools with higher scores. The following remark was fairly typical: "We're doing a great job. You have to look at what we're working with."

These attitudes illustrate that teachers in some Kentucky schools do not yet believe in the capabilities of all of their students, which may play a role in the continued achievement gap for low-income and minority students. Statewide analyses reveal that such gaps exist not only in some of the schools studied but across the state. Catterall, Mehrens, Ryan, Flores, and Rubins (as cited in Petrosko, in press) concluded that the poorest schools and districts improved the least in their KIRIS accountability index scores—an average of 2.3 index points compared to 3.37 points for the wealthier districts. Phillip Roeder (1999) looked at KIRIS absolute scores from 1993-1997 and concluded that the more successful schools were likely to be located in school districts with low levels of minority enrollment and greater financial resources. Weston's analysis of Kentucky NAEP results since 1990 also showed that students qualifying for free or reduced-price lunch scored an average of about 20 points lower than students who were not eligible for lunch assistance (personal communication with Robert Sexton, Prichard Committee for Academic Excellence, June 15, 1999).

Performance of minority students in Kentucky, while on the rise, still lagged behind that of White students. Joseph Petrosko (in press) cites studies of KIRIS data (Kentucky Department of Education, 1995; Smith, 1997) and concludes that White students performed better, on average, than minority students. Weston, examining 1998 KIRIS scores, also noted that Kentucky schools achieved much weaker results with African American than with White students (personal communication with Robert Sexton, Prichard Committee for Academic Excellence, March 19, 1999). Only in elementary and middle school reading was the gap between White and African American students who scored "novice" less than 10 percentage points. Weston's analysis of NAEP results also shows that average scale scores of African American and Hispanic students lagged 20 points or more behind those of Whites in every area.

Even though performance gaps continue for certain student subgroups, evidence suggests that at least some teachers across the state, as well as in the study districts, are beginning to raise their expectations for students. Since 1994, the Kentucky Institute for Education Research has monitored educators regarding the KERA principle that all children can learn and most at a high level. The percentage of teachers who agreed with the statement rose from 35 percent in 1994 to 68 percent in 1999 (Kentucky Institute for Education Research, 1995, 1996, 1997a, 1999).

A possible explanation for the increase is that as teachers saw how students achieved at higher levels in response to accountability pressures, they challenged them to a greater degree. Holly Holland (1998) reported this phenomenon in her case study of a single Kentucky district. AEL researchers did not gather systematic data on this issue but heard occasional comments to this effect. A Lamont County teacher remarked during the early years of reform:

> I've always felt like I had enough experience with children to know which ones to push, which ones to encourage, which

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> ones to say, "I can't accept this." Now I have to push every one of them, because it's not that they're accountable, I'm accountable. I have to.

Similarly, a Vanderbilt County principal described how the combination of rewards/sanctions and student results led teachers at his school to raise their expectations of students:

> I think we are becoming more aware of all the students than we have [been] in the past . . . partially because [of] rewards and sanctions hanging out there over the top of us. . . . When I came here, the seventh and eighth grades were absolutely horrible. All we could think about was, "Boy, in two years they'll be gone. . . ." Well, those were the kids that we got these [high] scores with on the eighth-grade assessment. I pointed out to [the teachers], "You exceeded your threshold in the eighth grade by a little over a point, and you did it with those types of students." To me, that was probably a much bigger motivator than rewards or sanctions was. They realize that they have had a degree of success, where I don't think they really thought before that they could.

Kessinger Elementary special education teacher Linda Andrews reported in 1997-98 that because all students are included in the testing program, she had begun to challenge special education students to a greater degree:

> KERA has really changed the complexion of special education. It used to be you had your little IEP [individualized education plan], and you started where the student was and took them along. Now I have to do portfolios with students. It is a lot of work for me, but I have seen how these students can really write, much more than in the past. I have had to raise my expectations of students, and I have learned that they can do a great deal more than I thought.

In summary, Kentucky has made progress toward improving achievement for all students, but the degree of progress is difficult to measure due to the fluidity of the state assessment program and varying results on different test measures and across grade levels. Even so, elementary students generally improved their scores on a variety of measures over the past decade. Gaps related to socioeconomic level and minority status still exist, however, possibly related to low expectations for students from these two groups. The OCES case suggests that when schools have high expectations for all students and develop strategies to help all succeed, learning will improve.

## Curriculum, Instruction, and Assessment Practices

### Curriculum and Instruction

The effect of Kentucky's reform effort on curriculum and instruction is evident in the changes common to the three case study schools: focus on writing, alignment of curriculum to test content, and implementation of new instructional approaches (including subject matter integration and computer use). Similar changes were noted in the other schools studied and by researchers around the state, as described below.

**Focus on writing.** Several studies have shown that a major outcome of the assessment and accountability program, with its strong writing component, has been an increased emphasis on writing in the classroom (Bridge, Compton-Hall, & Cantrell, 1996; Fenster, 1996; Kelley & Protsik, 1997; Koretz, Barron, Mitchell, & Stecher, 1996; Matthews, 1997; Stecher, Barron, Kaganoff, & Goodwin, 1998). In the schools studied, teachers placed more emphasis on writing in the fourth grade, when students were required to develop writing portfolios and respond to on-demand writing prompts on the KIRIS test, than in the third and fifth grades. Even so, writing was a regular part of the curriculum for the class of 2006 from 1996 through 1999. It is unlikely that many teachers would have emphasized writing to such a degree if they had not felt forced to; yet, like teachers in the AEL study, many teachers around the state saw the benefits of writing. A statewide survey in 1996-97 found that 84 percent of fourth-grade writing teachers and 71 percent of seventh-grade writing teachers believed the KIRIS writing portfolio had a positive effect on writing instruction (Stecher et al., 1998).

**Curriculum alignment.** As in the AEL study, statewide studies have shown that many teachers have responded to accountability pressures by aligning the curriculum to the test content (Kannapel &

Coe, in press; Kelley & Protsik, 1997; Koretz, et al., 1996; McDiarmid, et al., 1997). The curriculum alignment process reported in the schools studied and statewide may not have mirrored precisely the outcome envisioned by systemic reformers and the framers of KERA. The seminal work of Smith and O'Day (1991) on systemic reform suggests that local districts, with state support and assistance, should develop locally responsive curricula, within the structure of curriculum frameworks, that describe the knowledge, skills, and attitudes expected of students at the end of specified, long-range time periods.

While Kentucky did develop a curriculum framework (Kentucky Department of Education, 1993) that outlined a process by which local districts and schools could develop their own curricula within the bounds of state learning goals and academic expectations, schools in the four study districts and across the state made minimal use of it because of its 500-plus page length and lack of specific connections to the test content (AEL, 1994, 1995; Corcoran, as cited in Matthews, 1997; Koretz, et al., 1996).

In contrast, the *Core Content for Assessment* (Kentucky Department of Education, 1996), which identified specific content to be tested, was used heavily in the study districts and across the state (Stecher, et al., 1998). Alignment to test content was not meant to restrict teaching to only the test content. The introduction to the *Core Content for Assessment* explained that it should be part of local curriculum but that the local curriculum should go beyond test content to include national standards, community topics, and other content/skills/performances the state assessment could not address. Educators in the schools studied and others around the state (Thacker, Hoffman, & Koger, 1998), however, believed the *Core Content for Assessment* was too comprehensive to permit expanding curricula to other topics. Not only did educators believe that the *Core Content for Asssessment* limited the overall curriculum, but teachers in the accountability grades at the study schools and statewide (Koretz, et al., 1996) reported giving greater emphasis to subjects tested at their grade levels.

The heavy use of the *Core Content for Assessment* to guide curricular decisions fulfills a prophecy made by Daniel Koretz and colleagues in 1996: "If the state's framework is insufficiently detailed, teachers may respond by using the assessment itself as a surrogate for a curriculum framework" (p. 58). It might be argued, however, that the framework was sufficiently specific but that districts and schools needed more assistance in adapting it to local curricula to serve the joint purpose of helping students achieve KERA goals and preparing them for the assessment (Foster, 1999).

**New instructional approaches.** The KERA learning goals, the primary program critical attributes, and the expectation of high levels of achievement for all students called on teachers to change their instructional practices. As noted in the case studies, teachers at all grade levels experimented with new instructional approaches, with the greatest changes at the primary level, where specific critical attributes were mandated. Pressure to prepare students for the state assessment led primary teachers to pull away from some of the new practices, yet other new approaches persisted in the schools studied and statewide, including dual-age groupings, flexible seating arrangements, frequent partner or group work, use of authentic literature to teach reading, and use of hands-on materials (AEL, 1998; Bridge, 1995; McIntyre & Kyle, 1997).

Beyond the primary level, flexible seating arrangements and group work were less common but sometimes occurred for specific activities in the schools studied. Hands-on science activities in grades four and five took place once a week on average in five of the six schools. Fourth- and fifth-grade teachers regularly employed authentic literature to teach reading. Some teachers integrated subject matter in the form of writing across the curriculum and frequent correlation of children's literature with science and social studies topics. Integration within mathematics and science topics was less frequent.

Statewide research also uncovered instructional changes beyond the primary level. Fourth- and fifth-grade teachers responding to a statewide survey reported frequent integration of math with writing, science, and reading as well as writing with social studies and science. In addition, more than half of fifth-grade mathematics teachers reported increases in writing about mathematics, using calculators or computers to solve problems, working on extended activities over several days, using manipulatives to solve problems, and solving nonroutine problems (Stecher, et al., 1998).

In the schools studied, teachers at all grade levels used computers in the classroom, but the frequency of use and the extent of integration into the instructional program varied by district. This variation

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related to the district's capacity to provide sufficient computer hardware, software, professional development, and technical support. OCES teachers were particularly adept at incorporating computer technology into research projects. Many teachers did not fully integrate computer technology into their instructional programs because the number of classroom computers was insufficient or because teachers lacked the skills and knowledge to use technology effectively.

The instructional changes appear to be in the appropriate direction for KERA and systemic reform, but teachers are still a long way from radically changing the way they instruct students. Observations and interviews in the schools studied from 1996 through 1999 produced little evidence of substantive or regular opportunities for students to engage in critical thinking, problem solving, or exercises that required applying knowledge to real-life situations—although OCES and KES displayed more of these activities than the other study schools. Even at these two schools, however—and, more clearly, at the remaining four–classroom instruction continued to be predominantly teacher directed and focused on imparting basic factual knowledge to students. A statewide RAND study reported similar findings: the most common mathematics teaching activities across grade levels were practicing computation skills and working problems from a textbook, while the most common writing activity was practicing English mechanics (Stecher, et al., 1998; Stecher & Barron, 1999).

The dominance of traditional instructional approaches in Kentucky schools is not surprising, given the lack of historical precedent for the kinds of changes expected under KERA. A number of researchers have noted that, while peripheral changes occur continually in schools, features at the heart of classroom experience resisted change over the course of the twentieth century. These features include the very aspects of schooling that KERA sought to change: age and ability grouping, teacher-directed instruction, learning through repetition and memorization, division of knowledge into discrete subject areas, and surface coverage of a wide range of topics (Cuban, 1993; Elmore, 1996; Firestone, Mayrowetz, & Fairman, 1998; Tyack & Cuban, 1995; Tyack & Tobin, 1994).

Some researchers suggest that such practices persist because they were instituted early in the history of formal schooling in the United States and came to be considered characteristics of a "real school"

(Tyack and Cuban, 1995; Tyack & Tobin, 1994). Mary Metz (1990) proposed this concept to signify a common script for American schools that is accepted widely by educators and parents alike. Teachers at the schools studied were asked to explain why they had continued to use teacher-directed instruction focused on imparting factual knowledge when reform goals had called for developing students' higher-order thinking skills. Especially at the four most traditional schools, the teachers responded that they were responsible for conveying to students a vast body of factual knowledge. In addition, they believed that students could not effectively engage in higher-order problem solving until mastering "the basics." Teachers also feared they might lose control of student learning and behavior if they allowed more student direction in the classroom.

In addition to these entrenched teacher beliefs, other conditions contributed to teachers' inability or unwillingness to alter their instructional programs substantially. Two related factors were professional development and time. Changing from a fact-imparting approach to teaching for understanding requires a more intensive form of professional development than the traditional one-shot workshop. As noted in Chapter 1, studies have demonstrated that making this sort of change requires regular, ongoing support and modeling in the classroom and time for reflection with mentors and colleagues (Ball & Rundquist, 1993; Heaton & Lampert, 1993; McCarthey & Peterson, 1993). This approach to professional development requires a major investment of time and resources over a period of years. Kentucky increased funding for professional development substantially under KERA, and professional development improved in quantity and quality in the study districts and statewide, but ongoing support and technical assistance were rare (McDiarmid et al., 1997). Thus, few Kentucky teachers received the kind of intensive, long-term professional development they needed to make major changes in their classrooms.

A lack of time to incorporate new practices into the classroom compounded the inadequate number of professional development opportunities. Primary teachers, in particular, received many hours of professional development in new instructional approaches. When they tried to implement the new practices, however, they became exhausted by the effort required.

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A third factor contributing to the continued predominance of teacher-directed instruction that focused on imparting facts was the state testing system. As noted in Chapter 1, reform initiators believed that the state performance-based assessment would drive teachers to change their approaches, but the state test became less performance based over time. In addition, the KIRIS technical manual from the Kentucky Department of Education acknowledged that KIRIS had not reflected all 57 academic expectations and that open-ended response items had been associated mostly to goals 1 and 2, which emphasized basic factual content, and only a few related to goals 5 and 6, which emphasized thinking and problem solving (as reported in Petrosko, in press). Similarly, in a 1997 review of KIRIS test questions, Anthony Nitko concluded that KIRIS open-ended response and multiple-choice questions best assessed KERA goals 1 and 2. Thus, the test itself provided little incentive for teachers to change their instructional approaches but considerable incentive to make sure students were acquiring the mostly factual knowledge required by goals 1 and 2.

Another aspect of the assessment and accountability program that made teachers reluctant to try new instructional approaches was the high-risk environment. The clearest evidence of this was found in the primary program, where teachers initially experimented with new instructional practices but pulled away from innovation out of fear that the new approaches would not prepare students for the state assessment. Teachers in grades four and five also reported returning to the traditional scope and sequence to make sure they were covering all the content that would be tested. Thomas Corcoran and Barbara Matson (1998) reported similar results in their study of science instruction in Kentucky classrooms:

> Teachers under enormous pressure to improve student performance on KIRIS assessments were not so likely to experiment in the classroom. They wanted to know what would raise test scores, not what was "best" practice in the long run. They were most likely to use inquiry and other hands-on methods if they were aligned with the test or if they taught in an untested grade. (p. 31)

These findings illustrate the difficulty of changing individual practices that are rooted in teachers' own experiences and beliefs as well as in the history of schooling in this country. Making across-the-board changes as radical as those demanded by systemic reform may or may not be possible, but the Kentucky experience suggests it is possible to move teachers in that direction. Even greater movement might occur if states and districts would provide more adequate professional development, noninstructional time to institute change, and an incentive structure that gives teachers the motivation and freedom to experiment with new practices.

## Classroom Assessment

As noted in Chapter 1, the state assessment plan initially included an accountability test to measure *school* success at specific grade levels and a continuous assessment component that would measure *individual student* progress at frequent points in the year and at all grade levels (Kifer, 1994; Foster, 1999). The continuous assessment component was never developed, however, so major changes in classroom assessment were made mostly in response to the state accountability test. The exception was the primary grades, where teachers were required to implement authentic assessment techniques. The Kentucky Early Learning Profile (KELP) was an instrument for continuous assessment, but it was not specifically tied to KERA goals and expectations, did not extend beyond the primary years, and proved so time consuming that it was not widely adopted in its entirety in the six schools studied or around the state (AEL, 1998; Office of Education Accountability, 1999). None of the study schools developed or used classroom assessment tools that tracked student progress toward Kentucky's learning goals and academic expectations.

One school in the study, OCES, developed various methods for tracking individual student progress within and across grade levels. District and school leaders were instrumental in this effort. The OCES principal and counselor instilled in teachers the importance of monitoring the progress of each student and assisted them in doing so; the district developed a skills checklist to track progress across the primary grades. The OCES case suggests that developing systems for monitoring the progress of individual students throughout the school year, and from one year to the next, could be a powerful tool for improving the learning of each student—so long as the results of such classroom assessments are used to adapt instruction accordingly.

## The Primary Program

In the early years of the reform, many primary teachers deemphasized or eliminated textbook work, skill drills, and rote memorization in favor of hands-on activities, learning centers, and other approaches that encouraged more active child involvement (AEL, May 1993). Primary teachers made more changes in their classrooms than teachers at other grade levels. The multiage groupings, varied instructional practices, and individualized assessments implemented by primary teachers were largely in response to the state mandate requiring that these (and other) "critical attributes" be implemented in all primary classrooms. The early efforts of primary teachers focused almost entirely on process rather than content, reflecting an emphasis on the critical attributes named in the KERA legislation.

Meanwhile, intermediate teachers focused on preparing students for the state assessment, mostly through writing portfolios and test preparation activities. With the pressure of accountability resting on these teachers' shoulders, they were more in tune than ever before to the skill levels of incoming students. Fourth-grade teachers began reporting almost immediately that primary students had come to them unable to demonstrate basic skills that had been apparent in students entering the fourth grade prior to KERA. The most common complaint was that students were not learning to spell and were not memorizing math facts (Coe, Kannapel, Aagaard, & Moore, 1995). Teachers also reported that these students, accustomed to more active classrooms, found it difficult to respond to the teacher-directed approaches of the fourth grade. In addition, many parents commented to teachers and AEL researchers that new reporting systems that replaced letter grades with descriptions of student learning provided little indication of how well their children were progressing compared to other students.

Many primary teachers returned to more traditional forms of instruction to prepare students for the state assessment due to pressure from intermediate teachers, rumblings from parents about qualitative reporting, and fatigue from implementing labor-intensive instructional programs whose influence on student learning was uncertain (AEL, 1998; Kannapel, Coe, & Aagaard, 1998). This is a puzzling development for several reasons. First, it seems that the varied instructional practices and individualized assessment stressed in the primary program should have contributed to the overall reform goal of high levels of achievement for *all* students. In addition, practices encouraging active child involvement seem more likely than traditional approaches to have nurtured students' higher-order thinking skills, as mandated by KERA goals 5 and 6. Also, KIRIS results consistently showed greater improvement at the elementary level than in middle and high schools, indicating that primary teachers did a comparatively fine job preparing students for the state assessment. Even so, complaints about the loss of basic skills in the primary program continued throughout the study period and, when coupled with the fatigue and uncertainty of the new approaches, led eventually to primary classrooms that resembled the more traditional fourth-grade classrooms.

Several factors likely contributed to the perception, in the face of contrary evidence, that the primary program was not beneficial to students. Teachers based their assertion about the lack of basic skills on classroom performance, not KIRIS results. As noted in the DES case, third/fourth-grade teacher Velma Lawson perceived that students were coming into her classroom with weaker spelling, phonics, and cursive writing skills than before KERA. Lawson was disturbed by this trend even though DES had performed at high levels on KIRIS. And indeed, primary teachers in the early years *were* more focused on process than content and, typically, did not link their practices to the *Core Content for Assessment*. In addition, students under KERA were asked to read authentic literature and engage in original creative writing, which required them to recognize new, more challenging words on a regular basis and to spell words that had not been memorized on spelling lists. Thus, students may have made more frequent errors than when they had memorized vocabulary and spelling words in isolation. Also, because some primary teachers in the early KERA years replaced the skill drill approach with new strategies, it is likely that students did enter fourth grade unable to recite some math facts and spelling words as they had done prior to KERA's implementation.

In addition, in focus group discussions in 1997 and 1998, the vast majority of teachers expressed the view that students must master basic skills before engaging in higher-order activities and before performing effectively on any test that requires the basic skills of reading, writing, and computation (as KIRIS and CATS do).

The KIRIS test focuses much more strongly on the basic factual knowledge called for in KERA goals 1 and 2 than on the higher-order skills called for in goals 5 and 6. The *Core Content for Assessment* focuses entirely on goals 1 and 2. These factors combined to convince primary teachers that the extra labor needed to implement the critical attributes was not worth the effort.

The primary program might have been incorporated into the overall reform at some stage in the process if primary teachers had been assisted in focusing their new practices on KERA goals and expectations, and if intermediate teachers had looked to the primary to identify instructional practices that might help students acquire those goals. The original vision was that the primary program concept would be so successful it would work its way up through the elementary school (Lois Adams-Rodgers & Nawanna Fairchild, personal communication, 2/18/93; Jack Foster, personal communication, 9/17/99). Instead, the pressure from the state assessment worked its way down into the primary.

## School-Level Decision Making

The three case studies reveal that, under KERA, schools made most decisions about how to improve student learning, which was the intent of systemic reformers and Kentucky policymakers. The extent to which schools used SBDM councils as the tool for making these decisions, however, varied across the study schools as well as around the state (AEL, December 1993, 1996; David, 1993, 1994; Kannapel, Moore, Coe, & Aagaard, 1995b; Kentucky Institute for Education Research, 1997b; Lindle, in press).

One reason decision making devolved to the school level was that the state required all schools, whether they had SBDM councils or not, to develop primary program action plans, technology plans, school improvement plans, and so forth, which were typically formulated by faculty committees rather than school councils. Councils often approved the plans, but the extent to which they read and had meaningful discussions about them varied from school to school (AEL, 1996).

These findings raise the issue of whether the formal SBDM structure is needed. Jack Foster (1999) posed this question in his retrospective book on the Kentucky reform:

> It appears that the policy objective of ensuring collaboration on [instructional] matters was met in many schools whether or not a school council was present. Even when school councils are present, they often are not used to facilitate collaboration but rather to confirm its results. In both schools with and without councils, teachers now are spending a great deal of time in consultation and joint planning. . . . Teachers seem to feel they can experience the benefits of school-based decision making without having to devote the time required to have council meetings that are seen as just an added burden. . . . The reason for creating school councils initially may not be a good reason for continuing them indefinitely. (pp. 151-152)

Evidence from the study schools that lacked councils indicates that teachers were likely to be included in the decision-making process in the absence of SBDM and that parents and minorities were the groups most likely to be left out of the decision-making process. Even in schools with councils, parents and minorities were often involved only marginally in decision making. State law currently requires two parents on every council and minorities on councils in schools with eight percent or more minority students enrolled. The minority representative may be the principal, a teacher, or a parent. This and other studies have shown, however, that few parents are interested in participating in SBDM and that those who serve on councils are often left out of the information loop or feel too intimidated to participate fully in the decision-making process (AEL, December 1993; Kannapel, Moore, Coe, & Aagaard, 1994; Kentucky Institute for Education Research, 1997b).

The situation is complicated further by the fact that educators, not parents or the school councils on which they serve, are held accountable for student progress on the state test. Since educators are held accountable, it is only natural that they would want to control the decision-making process. Even so, educators have felt somewhat limited in the scope of decisions they can make because of pressure from the high-stakes assessment and accountability program. As a result, decisions were remarkably similar from one school to the next:

aligning curricula to the test, concentrating on areas of weakness on KIRIS, and emphasizing writing. As reported earlier, the main influence on teachers' curricular decisions was the *Core Content for Assessment*, not SBDM council decisions. Other researchers have made similar observations; Jane Lindle (in press) references a 1997 dissertation by Mark Brown, which reported that middle school principals and teachers perceived that curricula and instruction had been driven by state mandates and assessment rather than by decisions at the school level. Councils could legally choose to develop curricula not centered on the state assessment, but such decisions are unlikely, given the central role of test scores in the accountability system.

It should be noted that there has been no public discussion about dismantling the SBDM mandate. SBDM has enjoyed popular support from its inception to the present day (Coe, Kannapel, & Lutz, 1991; Kentucky Institute for Education Research, 1999). A 1999 statewide survey reported that educators, parents, and the general public strongly supported the concept of making instructional decisions at the local level: 83 to 94 percent of each role group supported this notion. The same survey found that 64 to 85 percent of educators and parents involved with SBDM thought it was working well at their schools (Kentucky Institute for Education Research, 1999).

In addition to enjoying popular support, SBDM provides a vehicle for parent input if parents choose to exercise that option. In the 1991-95 phase of research, the researchers observed parents involved in decision making on several occasions (AEL, December 1993; Kannapel, Moore, Coe, & Aagaard, 1994), as the KES case illustrates. More typically, however, parents and minority members were unsure how to have a greater voice and received little encouragement from educators to participate more fully.

Findings from the AEL and other studies suggest that it would be politically inexpedient to dismantle SBDM, given its popular support and its inclusion of parents and minorities in the decision-making process. There is clearly a need, however, to provide councils with ongoing training and technical assistance (beyond the current mandate of six hours per year for new members and three hours for experienced members) on helping achieve KERA learning goals and academic expectations and on involving parents and minorities meaningfully in the process.

## Conditions Influencing Reform

The remainder of this chapter highlights five key conditions that influenced reform implementation, sometimes differentially across sites: state policy and its implementation, educator beliefs, district and school leadership, school culture, and teacher time.

### State Policy

State legislation and policy strongly influenced Kentucky schools through increased funding, the assessment and accountability program, and primary program mandates. Increased funding under KERA provided districts and schools with the necessary tools to implement reform. The assessment and accountability program pushed schools to focus their curricula and challenge all students to ever higher levels of achievement, but it also led most teachers to focus more strongly on test preparation than on student learning and provided insufficient incentive for teachers to develop students' higher-order thinking skills. Primary program mandates led teachers to try new instructional, assessment, and grouping practices, but lack of linkage to the larger reform (inherent in the state policy) confused them and obscured the intent of the primary program. Uneven implementation time lines also impeded reform at several points, most notably by requiring primary program implementation and school accountability testing before curriculum guidelines had been made available.

Another influential aspect of state policy was that KERA learning goals and academic expectations provided a focus for reform from its inception and helped maintain continuity even through changes in the assessment program. Uncoordinated implementation time lines, however, contributed to a fragmented view of reform in the study districts; only OCES—with strong leadership from principal Hamill—used the various reform components to contribute to the central goal of high achievement for all students. At other schools, the "big picture" of KERA—ensuring that each and every student achieves KERA goals and expectations—got lost in the initial push to get the various KERA strands in place and in the focus on test preparation.

### Educator Beliefs

These findings point to the important role of educator belief systems in implementing reform. Teachers in all schools studied believed strongly that basic skill instruction was important, and most thought this kind of instruction had to precede any attempts at developing students' higher-order thinking skills. Teachers did not believe students were learning more if they could not demonstrate mastery of basic reading, writing, mathematics, and spelling skills—even when test scores were on the rise. If teachers are to create classrooms that develop students' higher-order thinking skills, they will need assistance learning how to teach basic skills within the context of inquiry-based instructional activities, as well as evidence that this sort of instruction develops both sets of skills in students.

## District and School Leadership

The case studies illustrate the critical role that district and school leadership played in the extent to which reform was implemented. In the three case study schools, district support for reform fell along a continuum. The Orange County administration strongly supported reform tenets and used resources provided by the legislation to help schools implement reform. The administration actively promoted the reform philosophy of high achievement for all. It provided substantial support for professional development, put resource teachers in classrooms, and developed instruments for tracking student progress and teaching to reform goals. This approach bolstered reform at OCES, where the principal held a similar philosophy. OCES scores improved more than any other school in the district or the study. OCES also had the highest scores in the district and among the highest in the schools studied, in spite of serving a large number of poor children.

The Vanderbilt County administration also provided substantial resources and support for reform implementation but adopted a hands-off attitude to determining the direction of reform. No districtwide philosophy guided the reform effort, and schools were left on their own to determine how to implement reform. This produced vastly different approaches across the district, with very different results at each school. DES continued to have relatively high test scores, but scores declined in 1998, and there was no evidence that the faculty was willing to change instructional approaches to meet individual student needs—a factor that could become important if the student body changes.

The Lamont County administration was the least proactive of the three, mostly because of leadership turnover. The most obvious effects of this neutral stance were that, like Vanderbilt County, there was no districtwide focus for the reform effort (other than responding to state mandates) and (unlike Vanderbilt County) there was little support or resources for each school to follow its own path toward improvement. At KES, the most successful aspects of reform originated with teachers or parents, not with district or school leadership: active teaching styles, commitment to the primary program, an active SBDM council, and parent involvement. These efforts by parents and teachers proved insufficient to unify the school behind a common vision.

Principal leadership was also a critical element in reform implementation. At OCES, the study school that demonstrated the greatest success with school reform and student learning, the principal acted not only as an administrator but as an instructional leader and motivator. Her leadership was essential to the school's efforts to ensure that all students succeeded. At DES, the head teacher provided a central direction to teachers that motivated them to stress traditional academics and discipline, but the school vision he perpetuated was not closely aligned with KERA goals and academic expectations. Still, DES and OCES maintained strong, stable leadership focused around high expectations, and both schools showed high rates of improvement and relatively high test scores. Lack of sustained leadership at KES prohibited development of an overall school vision that could have improved student learning schoolwide; instead, learning was dependent on the individual vision of each classroom teacher.

The Kentucky Department of Education has taken steps to strengthen district and school leadership through the Kentucky Leadership Academy, a two-year program in which local administrators receive regular training and assistance on how to focus their schools on improved student learning. Data from another study suggest that the program has proven beneficial at upgrading the skills of existing leaders (Coe & Adams-Rodgers, in press; Kannapel & Coe, in press).

In addition to improving the skills of current school leaders, schools need to find and keep high-caliber principals, especially in rural areas with few resources and attractions. Because the changes initiated by KERA reach beyond mandates and incorporate an overall philosophical shift, school leaders play an integral role in reinforcing that philosophy. Successful reform implementation depends upon long-term leadership of principals who—in addition to their duties as administrators—act as instructional leaders and model the belief that all students can achieve challenging standards.

## School Culture

School culture and beliefs strongly influenced school readiness for reform. Only at OCES were educators really ready for the reform. They had already recognized the need to change their approaches if they were to help their overwhelming majority of poor students succeed, and had begun on the reform path prior to KERA. They seized the new resources KERA provided and implemented the reform with vigor. The willingness of parents to allow educators to proceed as they saw fit facilitated the district's and school's reform efforts. At OCES, parents were involved closely in their children's instructional program, which likely contributed to their willingness to leave policy decisions in the hands of educators.

Educators in two schools, Newtown and DES, felt no need for reform and viewed it as an imposition. Parents and community members were largely satisfied with local schools and did not push for change. Teachers at both of these schools implemented some changes initially but never felt comfortable with them and returned to traditional approaches within two years. Certain aspects of reform did produce changes at the two schools—focus on test content, emphasis on writing, computers in the classroom—but the changes were largely peripheral. Classrooms remained almost entirely teacher directed and focused on imparting facts, and few (if any) adaptations were made for students from diverse backgrounds or with different learning styles. These findings illustrate the limitations of state policy when schools are not receptive to it.

## Teacher Time

This report emphasizes that implementing systemic reform (as embodied in KERA) requires additional teacher time at several points in the process. Teachers must have time to engage in intensive professional development to help them make major changes in their instructional approaches. They need time to plan new strategies with their colleagues and locate materials and resources. They need time to practice new strategies with their students, gather data, reflect on the new strategies alone and with colleagues, and make adjustments. Time is also required to develop, implement, and maintain a system for continually assessing student progress toward KERA goals. Add to this the time needed to participate on school-based decision making councils and committees, or on district committees developing or aligning curriculum.

Other research on Kentucky's reform effort, as well as national literature on systemic reform, underscores the need to provide teachers with the time to implement reform (see David, 1994; Donahoe, 1993; Elmore, 1996; Gideonse, 1990; McDiarmid, et al., 1997; McIntyre, Hovda, & Kyle, 1996; Newman, 1998; O'Day, Goertz, & Floden, 1995; Raths & Fanning, 1993; Sykes, 1990; Wilson, et al., 1993). Without regular noninstructional time to learn about, plan, and implement reform, it is extremely unlikely that major changes will occur in classrooms.

## Conclusion

Implementing systemic reform requires educators to adopt beliefs and implement practices that are very different from the past. They must expect high achievement of all students, develop students' conceptual understanding of subject matter and ability to think and solve problems, continually assess student learning and adapt instruction to different learning styles, and make important policy decisions at the school level. The data shared in this report illustrate that full implementation is difficult even under the best of conditions, and impossible when local districts and schools are resistant or lack leadership and resources. The OCES case demonstrates that learning can be improved for all students when district and school leaders support a philosophy of inclusion and high expectations and encourage teachers to develop strategies for helping each and every student succeed. Even greater results might be achieved at OCES and across the state, however, if certain state and local policy issues are addressed. Part Three of this report highlights these issues.

# Part Three

## Policy Issues for Systemic Reform in Kentucky

When enacted in 1990, the Kentucky Education Reform Act (KERA) embodied an ambitious attempt to build a statewide system of education in which schools are responsible not only for delivering instruction but for ensuring that all students achieve challenging goals. Because Kentucky entered largely uncharted territory, unintended consequences and setbacks were to be expected along with educational improvements. This report has centered on three key aspects of KERA that flow from systemic reform theory (Smith & O'Day, 1991), as captured by the following research questions: To what extent and under what conditions during the decade of reform did the schools studied

1. help *all* students achieve KERA goals?
2. implement curriculum, instruction, and classroom assessment practices consistent with KERA goals?
3. make key decisions about how to improve student learning?

The report also examined the extent to which the schools studied implemented the primary program in ways that contributed to KERA goals.

The following sections summarize the research findings for each question and highlight two issues that cut across the research questions: the important role of school leadership and the need for time to implement the kinds of changes called for in KERA. Included are recommendations on specific policy issues that should be addressed if systemic reform is to succeed in Kentucky or elsewhere.

# Helping *All* Students Achieve

Statewide evidence from the Kentucky Instructional Results and Information System (KIRIS) and other assessments suggests that student achievement improved under KERA, at least at the elementary level. Moreover, the majority of parents interviewed for the AEL study, as well as those surveyed statewide, believed that student learning increased. Teacher interview data from the AEL study indicate that the accountability system motivated some educators to pay closer attention to students who had not been expected to do well on the assessment. Sometimes, when these students performed at higher levels than anticipated, educators reported changing their own attitudes about student capabilities. Statewide, larger percentages of educators each year expressed agreement with the KERA philosophy that all students can achieve.

Yet, a closer analysis of test scores, as well as attitudinal data from the AEL study and others, reveals that many educators had difficulty raising their expectations for children from low-income and minority backgrounds. Long-standing gaps in achievement between White and/or middle-class students, as contrasted with minority and/or poor students, continued to exist. The Orange County Elementary School (OCES) case study demonstrates, however, that high levels of student achievement are possible, even in low-income schools, when the faculty unites behind a powerful schoolwide vision of high achievement for each and every student, and closely monitors each child's progress and adapts instruction accordingly. In other schools studied, teachers often focused on improving whole-school test scores rather than monitoring and improving learning for each student, thus fulfilling a prophecy made by Haertel (1994) that Kentucky's high-stakes accountability system might contribute to the pursuit of improved test scores as the goal of education rather than the "intellectual attainments those grades are meant to represent" (p. 70). Similarly, Stecher and Barron (1999) found that the accountability system caused Kentucky teachers to focus on "the most proximal aspects of the system (tests) rather than the more distant goals it is supposed to promote (curriculum and performance standards)" (p. 31).

Related to this is the observation that changes in classroom assessment, for the most part, reflected preparation for the KIRIS assessments. Absent in most places was any system for tracking the progress of individual students toward KERA goals and expectations. Some districts and schools instituted systems for documenting coverage of the *Core Content for Assessment*, and some developed school improvement plans that called for generic activities aimed at raising whole-school scores. But these sorts of activities, while perhaps providing a first step toward improved student learning, did not typically lead to a focus on KERA's main target: individual student learning. Stiggins (1999) could have been describing many Kentucky schools when he commented that high-stakes testing causes teachers to increase their levels of "nervous, yet unfocused, activity as they try to guess what course of instructional action might lead to higher test scores" (p. 192). Stiggins goes on to suggest that high-stakes testing programs need to be blended with high-quality classroom assessment so important decisions about student learning will be based on specific information about how individual students are performing. This was the original intent in Kentucky, but the classroom assessment component was never developed and implemented.

These findings suggest a need to remind educators that the central goal of KERA is to help each child achieve. This theme should be part of every KERA-related activity: professional development, curriculum planning, school-based decision making council meetings, extended school services, and so forth. In addition, educators need ongoing professional development and technical assistance to increase their repertoire of classroom assessment and instructional approaches to help them meet the needs of students from different cultural backgrounds or with different learning styles.

**Recommendation 1.** Education agencies at every level need to incorporate into all KERA-related activities an emphasis on and strategies for improving the learning of *each* child as a necessary strategy for improving test scores for all children.

## Curriculum, Instruction, and Assessment Practices

Kentucky's reform effort influenced curriculum, instruction, and assessment practices in several observable ways: greater emphasis on writing, alignment of the curriculum with the state assessment, increased integration of subject matter, increased use of computers, greater variety of instructional strategies and materials, and increased use of open-ended response and portfolio items for classroom assessment. Overall, these changes gave schools and classrooms greater curricular focus and made them more interesting places. In addition, planning for these changes brought teachers together to discuss how to improve curriculum, instruction, and student learning at their schools—conversations that happened too rarely prior to KERA. But teachers still need help in two areas of classroom practice: teaching the higher-order thinking skills emphasized in KERA goals five and six, and integrating technology into the instructional program. Helping teachers make these changes may require a shift in emphasis in the accountability system toward more positive incentives for change. Each of these issues is discussed below.

## Helping Teachers Change Classroom Practice

Most teachers across the nation, including those in Kentucky, were educated in an environment focused on knowledge as a collection of facts, hierarchical approaches to skills development, and teacher-directed instruction (Clune 1993; Darling-Hammond, 1997; Smith & O'Day, 1991). Their professional education did less to prepare them to teach challenging content, problem solving, and higher-order thinking skills. Data from the six schools studied show that teachers made many changes in their classrooms but were unable, or unwilling, to move much beyond a teacher-directed approach that emphasized acquisition of factual knowledge. There are three possible explanations for this lack of movement: (1) they did not believe in "teaching for understanding" (generally believing that students need a strong background in the basic skills before attempting higher-order work), (2) they did not know how to implement this new work, or (3) they did not have the time or support structure to learn.

A related issue is the difficulty teachers faced in learning about and incorporating instructional technology into the classroom. Students had much greater access to technology under KERA, and teachers used technology for administrative purposes, to teach word processing, and to reinforce skills; but they struggled to integrate technology into the regular instructional programs.

**Recommendation 2.** If this implementation of KERA is to be successfully continued and refined, state and local education agencies, as well as professional development providers, need to create and implement professional development and technical assistance opportunities that assist teachers in

- teaching the higher-order skills defined in KERA goals five and six
- integrating technology into the classroom instructional program

## Rethinking Accountability and Incentives

Kentucky's KIRIS assessment and accountability system got educators' attention and generated discussion and activities that improved curriculum, instruction, and student learning. Now that schools have aligned their curricula to the test and taught students how to respond to test items, they are often at a loss as to what to do next to keep scores improving, suggesting that the accountability system has reached a plateau in motivating change.

As discussed above, in addition to needing greater focus on individual student learning, most teachers need assistance in creating classrooms where basic content and higher-order thinking skills are taught simultaneously in ways that help develop deeper conceptual understanding of subject matter for all students. External rewards and sanctions cannot help teachers learn to teach in these ways, nor has the accountability structure sufficiently motivated teachers to focus on the learning of each and every student.

Wheelock (2000) suggests that if accountability systems are to improve teaching and learning, they cannot rely solely on progress toward meeting accountability goals. Instead, she proposes that accountability should focus not only on the results of teaching but on classroom practices that have been demonstrated to lead to success for students. Elmore (1996) proposes linking external incentives for change, such as content and performance standards developed by professional bodies, to internal reward systems that might include salary increases for teachers completing staff development (related to changes in practice) or released time for teachers to learn about and implement the fundamental changes required by systemic reform.

Other researchers propose a school quality review process in which schools account not only for student learning but for areas such as professional practice, equity, opportunity to learn, and community building (Ruff, Smith, & Miller, 2000; Whitford & Jones, 2000). Kentucky is presently developing a scholastic audit that will examine some of these factors, but, as currently conceived, the audit will be required only in schools with declining accountability indexes. Making such a tool available to all schools might help teachers focus on professional practice as it relates to student learning rather than focusing solely on improving assessment scores.

These approaches to accountability suggest a need to balance external rewards and sanctions with incentives that encourage and guide teachers to make the kinds of classroom changes needed to achieve KERA goals.

**Recommendation 3.** State policymakers should continue to develop the KERA assessment and accountability system in ways that provide positive incentives for educators to create classrooms in which each child is given the opportunity to achieve Kentucky's learning goals and academic expectations.

## School-Based Decision Making

In Kentucky, school-based decision making (SBDM) councils were created to enable local educators and parents to decide how to help students achieve KERA goals and expectations. The councils were to include three teachers, two parents, and an administrator and have broad authority to establish policies. Yet, data from the schools studied as well as data from schools around the state reveal that councils have often been minor players in the decision-making process. Decision making about curriculum, instruction, and student learning did shift from the district to school level over the past decade, although SBDM councils were rarely the vehicle used. As noted in Chapter 6, Foster (1999) has questioned whether SBDM councils are even needed, so long as school-level professionals are empowered to make decisions about how to improve student learning. However, eliminating SBDM councils is not advisable for two reasons: (1) they provide a formal mechanism by which teachers and parents—including those representing minority groups—can have input into school policy decisions and (2) they enjoy popular support.

**Recommendation 4.** If SBDM councils are to be key instruments for school-level decision making, state and local education agencies need to provide councils with better information, guidelines, and training on how to be effectively involved in policy decisions about curriculum, instruction, and student learning; and on how to involve parents and minority representatives in more meaningful ways.

## The Primary Program

The primary program was designed, in part, to model instruction that would help students achieve KERA goals and expectations. It motivated teachers to try to create developmentally appropriate classrooms in which students could progress at their own rates, but lack of clear linkages with the KERA assessment and accountability system confused teachers and hampered full implementation of the primary program.

**Recommendation 5.** If the primary program is to be effectively implemented, state and local education agencies need to provide teachers with professional development and technical assistance on creating and operating the primary program in ways that help students achieve Kentucky's learning goals and academic expectations.

## Leadership

Education scholars have long stressed the principal's role in school success (Bliss, Firestone, & Richards, 1991; Edmonds, 1979; Sergiovanni, 1991). Strong leadership in and of itself is not enough to ensure success, but it can affect other areas that lead to success, such as the institutionalization of a school vision and collegial and cooperative relationships (Brookover & Lezotte, 1979; Lipsitz, 1984).

The case studies in Chapters 3, 4, and 5 illustrate the pivotal role of district and school leadership. In Orange County, the district central office leadership provided a vision and resources to support school improvement. The OCES principal believed in the district vision and used her leadership skills to support and motivate teachers to work toward high levels of achievement for all students. District and school leaders stayed in place long enough to encourage adoption of the vision among district and school staff. Even at Dyersburg Elementary School (DES), leadership by the head teacher ensured a consistent approach over time, which included expectations for high performance, even though aspects of the school's program did not fall in line with KERA goals and expectations. At Kessinger Elementary School (KES), by contrast, the lack of stable leadership at both the district and school levels prevented a school with an energetic and innovative faculty from pulling together around a unified vision for school improvement.

Kentucky, like other states (Keller, 2000; Olson, 2000b), has suffered in recent years from a shortage of qualified principal applicants. The problem is especially acute in rural districts like Lamont County, which have few resources and attractions to lure outsiders. The Kentucky Leadership Academy has begun to tackle the task of upgrading the skills of existing leaders, but this effort does not eliminate the need to recruit skilled educators into leadership positions, particularly in rural areas.

Kentucky might look to other localities for ideas on how to recruit and retain high-quality principals. For instance, some Oregon school districts developed recruitment programs that helped identify and train prospective principals from within the districts' ranks of teachers; full-time internships allowed prospective principals to experience real-life administrative situations (Anderson, as cited in Klauke, 1988). Houston, New York City's Community District 2, Nebraska's Millard district, and Philadelphia also have developed recruitment programs (Keller, 2000; Olson, 2000a).

**Recommendation 6.** State and local education agencies need to continue efforts to develop instructional leadership skills in school principals and to create strategies to identify, recruit, and assist skilled local educators in obtaining principal certification (especially in rural areas).

## Time

In all three case studies presented in Part Two, the issue of time emerged as problematic. Implementing systemic reform (as embodied in KERA) requires additional teacher time for participating in professional development efforts, planning and implementing new instructional and assessment strategies, locating materials and resources, meeting with colleagues, and serving on school committees. Schools across the country are experimenting with creative ways of making time for teachers and students to engage in the kinds of activities called for under reform (Ancess, 1995; Darling-Hammond, 1996; Darling-Hammond et al., 1993; Raywid, 1993; Snyder, Lieberman, Macdonald, & Goodwin, 1992). Their experiences could provide direction for Kentucky schools.

**Recommendation 7.** State and local education agencies need to create ways to provide teachers with the necessary time to learn about and implement the changes required by KERA.

## Conclusion

Systemic reform as implemented in Kentucky has resulted in school curricula that are more focused and aligned with state standards and in classrooms that are better equipped as well as more interesting, active, and enjoyable. Evidence from various assessment measures indicates that KERA has also paid off in terms of student achievement, at least at the elementary level. But KERA has not been implemented systemically in many places, and the goal of high achievement for all students has yet to be attained.

Education reform has only begun in Kentucky. Even though proponents of systemic reform envision a unified system in which all the pieces cohere and classrooms are centers of active student learning, systemic reform as played out in Kentucky might be viewed as another example of "tinkering toward Utopia" (Tyack & Cuban, 1995); it has produced positive changes, but more work is needed at the state, district, and school levels before reaching the Utopia envisioned by the systemic movement and the framers of KERA. Developing a coherent, smoothly running system may require periodic adjustments, adaptations to local context, and time for participants to learn how to accomplish reform goals. Kentucky policymakers have shown willingness to engage in these kinds of adjustments, which may account for the fact that reform is still alive and well after

10 years. The framers of KERA set a target of 20 years to accomplish goals and objectives the law enacted. Kentucky still faces the major hurdle of raising teachers' expectations for all students, including those from low-income and minority backgrounds. Creating the kinds of structures and supports described in this chapter might go a long way toward helping teachers and others responsible for the education of Kentucky children help *all* students achieve to high standards.

# Appendixes

# Appendix A

# KERA Learning Goals and Academic Expectations

## Kentucky's Academic Expectations

**Goal 1 - Students are able to use basic communication and mathematics skills for purposes and situations they will encounter throughout their lives.**

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools such as interviews and surveys to find the information they need to meet specific demands, explore interests, or solve specific problems.

1.2 Students make sense of the variety of materials they read.

1.3 Students make sense of the various things they observe.

1.4 Students make sense of the various messages to which they listen.

1.5 - 1.9 Students use mathematical ideas and procedures to communicate, reason, and solve problems.

1.10 Students organize information through development and use of classification rules and systems.

1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

1.13 Students make sense of ideas and communicate ideas with the visual arts.

1.14 Students make sense of ideas and communicate ideas with music.

1.15 Students make sense of and communicate ideas with movement.

1.16 Students use computers and others kinds of technology to collect, organize, and communicate information and ideas.

**Goal 2** - **Students shall develop their abilities to apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, practical living studies, and vocational studies to what they will encounter throughout their lives.**

### Science

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.3 Students identify and analyze systems and the ways their components work together or affect each other.

2.4 Students use the concept of scale and scientific models to explain the organization and functioning of living and nonliving things and predict other characteristics that might be observed.

2.5 Students understand that under certain conditions nature tends to remain the same or move toward a balance.

2.6 Students understand how living and nonliving things change over time and the factors that influence the changes.

### Mathematics

2.7 Students understand number concepts and use numbers appropriately and accurately.

2.8 Students understand various mathematical procedures and use them appropriately and accurately.

2.9 Students understand space and dimensionality concepts and use them appropriately and accurately.

2.10 Students understand measurement concepts and use measurements appropriately and accurately.

2.11 Students understand mathematical change concepts and use them appropriately and accurately.

2.12 Students understand mathematical structure concepts including the properties of logic of various mathematical systems.

2.13 Students understand and appropriately use statistics and probability.

**Social Studies**

2.14 Students understand the democratic principles of justice, equality, responsibility, and freedom and apply them to real-life situations.

2.15 Students can accurately describe various forms of government and analyze issues that relate to the rights and responsibilities of citizens in a democracy.

2.16 Students observe, analyze, and interpret human behaviors, social groupings, and institutions to better understand people and the relationships among individuals and groups.

2.17 Students interact effectively and work cooperatively with the many ethnic and cultural groups of our nation and world.

2.18 Students understand economic principles and are able to make economic decisions that have consequences for daily living.

2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real-life situations.

2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspective.

2.21 (Incorporated into 2.16)

**Arts and Humanities**

2.22 Students create works of art and make presentations to convey a point of view.

2.23 Students analyze their own and others' artistic products and performances using accepted standards.

2.24 Students have knowledge of major works of art, music, and literature and appreciate creativity and the contributions to the arts and humanities.

2.25 In the products they make and the performances they present, students show that they understand how time, place, and society influence the arts and humanities such as languages, literature, and history.

2.26 Through the arts and humanities, students recognize that although people are different, they share common experiences and attitudes.

2.27 Students recognize and understand the similarities and differences among languages.

2.28 Students understand and communicate in a second language.

**Practical Living Studies**

2.29 Students demonstrate skills that promote individual well-being and healthy family relationships.

2.30 Students evaluate consumer products and services and make effective consumer decisions.

2.31 Students demonstrate the knowledge and skills they need to remain physically healthy and to accept responsibility for their own physical well-being.

2.32 Students demonstrate strategies for becoming and remaining mentally and emotionally healthy.

2.33 Students demonstrate the skills to evaluate and use services and resources available in their community.

2.34 Students perform physical movement skills effectively in a variety of settings.

2.35 Students demonstrate knowledge and skills that promote physical activity and involvement in physical activity throughout their lives.

**Vocational Studies**

2.36 Students use strategies for choosing and preparing for a career.

2.37 Students demonstrate skills and work habits that lead to success in future schooling and work.

2.38 Students demonstrate skills such as interviewing, writing resumes, and completing applications that are needed to be accepted into college or other postsecondary training or to get a job.

**Goal 3** - **Students shall develop their abilities to become self-sufficient individuals.**

**Goal 4** - **Students shall develop their abilities to become responsible members of a family, work group, or community, including demonstrating effectiveness in community service.**

**Goal 5** - **Students shall develop their abilities to think and solve problems in school situations and in a variety of situations they will encounter in life.**

5.1 Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating, and comparing to solve a variety of problems in real-life situations.

5.2 Students use creative thinking skills to develop or invent novel, constructive ideas or products.

5.3 Students organize information to develop or change their understanding of a concept.

5.4 Students use a decision-making process to make informed decisions among options.

5.5 Students use problem-solving processes to develop solutions to relatively complex problems.

**Goal 6** - **Students shall develop their abilities to connect and integrate experiences and new knowledge from all subject matter fields with what they have previously learned and build on past learning experiences to acquire new information through various media sources.**

6.1 Students connect knowledge and experiences from different subject areas.

6.2 Students use what they already know to acquire new knowledge, develop new skills, or interpret new experiences.

6.3 Students expand their understanding of existing knowledge by making connections with new knowledge, skills, and experiences.

(Sources: Kentucky Department of Education, 1993; July 1994).

# Appendix B

## Dissemination Efforts of AEL KERA Study, 1990-2000

### Book Chapters, Journal Articles, Research Reports

Kannapel, P. J., Coe, P., Aagaard, L., Moore, B. D., & Reeves, C. A. (2000). Teacher responses to rewards and sanctions: Effects of and reactions to Kentucky's high stakes accountability program. In B. L. Whitford and K. Jones (Eds.), *Accountability, assessment, and teacher commitment: Lessons from Kentucky's reform effort*, (pp. 127-146). Albany: State University of New York Press.

Kannapel, P. J., Coe, P., Aagaard, L., & Reeves, C. A. (1999). Mandated achievement in rural Kentucky: Contrasting responses. *Journal of Research in Rural Education, 15* (1), 5-15.

Kannapel, P. J., Coe, P., Aagaard, L., & Reeves, C. A. (1999). A rejoinder to Toni Haas' reply. *Journal of Research in Rural Education, 15* (1), 17-18.

Kannapel, P. J., Moore, B. D., Coe, P., & Aagaard, L. (1995). Six heads are better than one? School-based decision making in rural Kentucky. *Journal of Research in Rural Education, 11* (1), 15-23.

Coe, P., & Kannapel, P. J. (1992). Rural responses to Kentucky's education reform act. In G. A. Hess, Jr. (Ed.), *Empowering teachers and parents: School restructuring through the eyes of anthropologists* (pp. 103-128). Westport, CT: Bergin & Garvey.

Coe, P., & Kannapel, P. (1991) *Systemic reform in six rural districts: A case study of first reactions to the Kentucky Education Reform Act of 1990*. Charleston, WV: AEL and the ERIC Clearinghouse on Rural Education and Small Schools.

Coe, P., Kannapel, P., & Lutz, P. (1991). *Initial reactions to the Kentucky Education Reform Act in six rural Kentucky school districts*. Charleston, WV: AEL.

### Regular Newsletter from AEL Study

*Notes from the Field: Education Reform in Rural Kentucky*. A publication of AEL, Charleston, WV. This research bulletin regularly shares findings on AEL's study of the implementation of the Kentucky Education Reform Act in four rural, Kentucky school districts. Issues published from May 1991 through September 1992 were written by Pamelia Coe and Patricia Kannapel. Beverly Moore and Lola Aagaard assisted in writing all issues from May 1993 to 2000. The following issues have been published:

*KERA in the classroom.* (2000, March). Volume 7, Number 1.

*Evolution of the primary program in six Kentucky schools.* (1998, September). Volume 6, Number 1.

*Five years of education reform in rural Kentucky.* (1996, February). Volume 5, Number 1.

*Instruction and assessment in accountable and nonaccountable grades.* (1994, December). Volume 4, Number 1.

*School-based decisionmaking after two years.* (1993, December). Volume 3, Number 2.

*Kentucky's primary program.* (1993, May). Volume 3, Number 1.

*KERA through the eyes of teachers.* (1992, September). Volume 2, Number 2.

*KERA finance measures.* (1992, April). Volume 2, Number 1.

*Family resource/youth services centers.* (1991, December). Volume 1, Number 3.

*School-based decisionmaking.* (1991, September). Volume 1, Number 2.

(Untitled issue). (1991, May). Volume 1, Number 1.

## Conference Papers/Presentations

Kannapel, P. J. (2000, March 31). Participated on panel titled "Impact of high-stakes testing on schools and reform, school culture, and schools as learning organizations." Conference on High Stakes-Testing, sponsored by the National Center for Restructuring Education, Schools, and Teaching; National Center for Fair and Open Testing (FairTest), and Center for Inquiry in Teaching and Learning. Teachers College, Columbia University, New York, NY.

Coe, P., Kannapel, P. J. , Aagaard, L., & Reeves, C. A. (1999, November). *Systemic reform in rural Kentucky schools: "It's been real, it's been good, but it ain't been real good."* Paper presented at the annual meeting of the American Anthropological Association, Chicago.

Aagaard, L., Kannapel, P. J., Reeves, C. A., & Coe, P. (1999, May). *Community and educator goals for rural schools.* Paper presented at the Qualitative Research in Rural Education Conference, Morgantown, WV.

Reeves, C. A., Kannapel, P. J., Coe, P., & Aagaard, L. (1999, May). *Race in a rural place.* Paper presented at the Qualitative Research in Rural Education Conference, Morgantown, WV.

Kannapel, P. J., Aagaard, L., & Coe, P. (1998, April). *Kentucky's multiage primary program: Varying levels of implementation.* Paper presented at the annual meeting of the American Educational Research Association, San Diego.

Kannapel, P. J., Coe, P., & Aagaard, L. (1998, April). *A pair-a-digms or the clash of the titans: Top-down meets bottom-up reform in Kentucky.* Paper presented at the annual meeting of the American Educational Research Association, San Diego.

Coe, P., Kannapel, P. J., & Aagaard, L. (1997, November). *State, local, and ethnographic perspectives on school reform: Trying to know the unknowable?* Paper presented at the annual meeting of the American Anthropological Association, Washington, DC.

Kannapel, P. J., Aagaard, L., & Coe, P. (1997, March). *Kentucky education reform after six years: Positive results, critical issues.* Paper presented at the annual meeting of the American Educational Research Association, Chicago.

Kannapel, P. J., Coe, P., Aagaard, L., & Moore, B. D. (1996, April). *"I don't give a hoot if somebody is going to pay me $3600": Local school district reactions to Kentucky's high stakes accountability program.* Paper presented at the annual meeting of the American Educational Research Association, New York.

Kannapel, P. J., Coe, P., & Moore, B. D. (1996, April). *Vulnerability and invulnerability to change in two rural Kentucky school districts.* Paper presented at the annual meeting of the American Educational Research Association, New York.

Coe, P., Kannapel, P. J., & Aagaard, L. (1996, April). *Two eastern Kentucky "Lighthouse" districts resist and embrace reform.* Paper presented at the annual meeting of the American Educational Research Association, New York.

Kannapel, P. J., Moore, B. D., Coe, P., & Aagaard, L. (1995, April). *Opposition to outcome-based education in Kentucky.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

Kannapel, P. J., Moore, B. D., Coe, P., & Aagaard, L. (1994, April). *School-based decision making in rural Kentucky schools: Interim findings of a five-year longitudinal study.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Aagaard, L., Coe, P., Moore, B. D., & Kannapel, P. J. (1994, April). *A qualitative look at Kentucky's primary program: Interim findings from a five-year study.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Coe, P., & Kannapel, P. (1992, December). *Education reform in rural Kentucky: Total restructuring or selective remodeling?* Paper presented at the annual meeting of the American Anthropological Association, San Francisco.

Coe, P., & Kannapel, P. (1991, November). *Systemic reform in small, rural school districts: The Kentucky story to date.* Paper presented at the annual meeting of the American Anthropological Association, Chicago.

## Presentations

"Findings of AEL longitudinal study," Morehead Rotary Club, Morehead, KY, April 12, 2000.

"Policy briefings: Findings of AEL longitudinal study"; hosted by AEL, Frankfort, KY, presented to representatives from Kentucky Department of Education, Kentucky General Assembly, Legislative Research Commission, Office of Education Accountability, Kentucky Governor's Cabinet, Prichard Committee, various professional and parent education associations, September 9 and 23, 1999.

"Policy briefing: Findings of AEL longitudinal study," AEL staff, Charleston, WV, August 23, 1999.

Kentucky General Assembly: "Research findings on Kentucky primary program," Issue Group on Teaching and Learning, subcommittee of Gov. Patton's Task Force on Public Education, Frankfort, KY, April 1997.

"Research findings on Kentucky primary program," Interim Committee on Education, Frankfort, KY, February 1994.

"Research findings on Kentucky primary program," Interim Committee on Education, Frankfort, KY, December, 1992.

"Implementation of Kentucky's primary program," participation in panel presentation, Prichard Committee Commonwealth Institute for Parents, Lexington, KY, November 1998.

"AEL Research on KERA Effects on Students," OVEC Summer Leadership Conference, Lexington, KY, July 1998.

"Research findings on Kentucky primary program," Morehead Rotary Club, Morehead, KY, April 8, 1998.

"Research findings on Kentucky primary program," staff of Office of Educational Research and Improvement, U.S. Department of Education, Washington, DC, November 1997.

"Professional development under KERA," participation in panel discussion, National Staff Development Council Annual Summer Leadership Forum, Louisville, KY, July 1997.

"KERA," participation in panel discussion, Politics of Education Association Annual Meeting, Louisville, KY, October 1996.

"KERA and Communication Education", participation in panel discussion," Kentucky Communication Association Lexington, KY, September 1994.

"Research findings on KERA implementation, " Kentucky Association of School Executives Annual Meeting, Lexington, KY, June 1994.

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# Appendix C

## Research Questions for 1996-2000 Research Phase

**Overarching Research Question:** Under what conditions, if any, in these districts and schools, did KERA change educator behaviors in ways that affected students?

**Subquestions**

**I. Descriptive (What happened in the following areas?)**

A. Curriculum

1. What subjects were taught, and how much time was spent on each?
2. To what extent was subject matter integrated?
3. What proportion of teacher time was spent teaching basic factual knowledge, process skills, thinking/problem-solving skills?

B. Instructional Practices

1. To what extent was instruction teacher directed or student directed?
2. How much variety of instructional practices was in evidence?
3. What were the predominant instructional materials employed?
4. To what extent were resource persons used (support staff, parents and community, peers and older students, other)?
5. To what extent was team teaching in evidence?
6. What sort of student grouping practices were employed?

C. Assessment

1. What kinds of assessments were used?
2. To what extent was assessment integrated with instruction?
3. What sorts of skills, concepts, knowledge were assessed?
4. Do teachers continuously assess student achievement to track progress toward KERA goals and expectations?

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D. Parent Involvement

  1. In what ways were parents involved with the schools and in their children's education?

E. Decision Making

  1. What structures were used to make decisions about curriculum and instruction?

  2. What were the strongest influences on decisions about curriculum and instruction?

F. Challenging All Students

  1. To what extent were all students challenged to meet KERA goals and expectations?

G. Effects on Students

  1. How did the above factors affect student achievement?

  2. How did the above factors affect student motivation and attitudes?

**II. Explanatory/Analytical (Why did it happen this way?)**

A. Educator Belief Systems

  1. In what ways do educator belief systems about the purpose and process of schooling contribute to what we saw and heard about in classrooms?

  2. How did teacher beliefs change over time, or did they? What got compromised or what contributed to the change?

B. School Culture/Structural Arrangements

  1. In what ways, if any, do structural arrangements (schedules, leadership, staffing, class size) contribute to what we saw and heard about in classrooms?

C. KERA Supports

  1. In what ways, if any, do KERA supports (assessment, academic expectations, core content, program of studies) contribute to what we saw and heard about in classrooms?

D. Students/Parents/Community

  1. In what ways do student/parent/community belief systems about the purpose and process of schooling contribute to what we saw and heard about?

E. Teacher Practices

  1. In what way, if any, do educator beliefs, interests, and experiences affect their instructional approaches?

  2. What does it take for teachers to change their practice?

# Appendix D

## Research Questions for 1991-1995 Research Phase

### Primary Program

A. Did the schools prepare and follow their primary program action plans?

B. To what extent do the primary programs, as implemented, incorporate the following critical attributes?

- developmentally appropriate educational practices
- multiage/multiability classrooms
- continuous progress
- authentic assessment
- qualitative reporting methods
- professional teamwork
- positive parent involvement

C. To what extent do the primary programs, as implemented, give evidence of promoting students' acquisition of the capabilities set forth in KERA, and of the skills required to move on to fourth grade?

D. If evidence exists that the characteristics listed in items B and C above have been incorporated into the primary programs, how was this achieved? If these characteristics have not been incorporated, why not?

E. What accounts for variation among the districts and schools in their ability to successfully (as described above) implement the primary program?

F. To what extent can what occurred in the study districts relevant to the primary program be attributed to KERA, other state initiatives, or district history?

G. What implications do these findings have for state policy?

### Family Resource Centers/Youth Services Centers

A. What plans has the district made for family resource centers and youth services centers?

B. How many centers were funded and/or are in place?

C. Are the centers following the plans spelled out in their proposals?

D. To what extent is there evidence that the family resource centers and youth services centers are identifying families and students in need of social, health, or other services to overcome barriers to school performance?

E. To what extent are the centers promoting coordination of services by community agencies and the schools in ways that link economically disadvantaged students and their families with available social and health services?

F. To what extent are the centers promoting the development of or providing services that are needed but not currently available in the community?

G. If so, how was this achieved? If not, why not?

H. What accounts for the variation among the four districts in their ability to successfully (as described above) implement the centers?

I. To what extent can what occurred in the study districts relevant to family resource and youth services centers be attributed to KERA or other influences, such as other state initiatives or the district's history?

J. What implications do these findings have for state policy?

## Governance/Authority Structure

A. How was the authority structure in the four districts changed?

- How many schools have implemented SBDM and at what state of development are they?
- Do administrators, teachers, and parents at local schools, working through school councils and committees, make and implement policy and personnel decisions that are designed to promote improved student performance?
- Do local school boards set district policies that are designed to promote improved student performance?
- Do local school boards support administrative and local school efforts designed to improve student performance?
- Do the superintendent and central office administration implement policies set forth by the school board?
- Do the superintendent and central office administration support policy and personnel decisions of school councils?

B. If so, how was this achieved? If not, why not?

C. In what ways has the relationship between the local district and the state department of education changed?

D. What accounts for variation among the four districts in their ability to alter their governance structure as described above?

E. To what extent can what occurred in the study districts relevant to authority structure be attributed to KERA or other influences, such as other state initiatives or the district's history?

F. What are the implications of these findings for state policy?

## Grades 4-12

A. What changes occur in grades 4-12–for instance, in instruction, assessment, technology?

B. What indications are there that the strategies employed by the districts are likely to assist students to acquire the capabilities and goals defined by KERA?

C. What variation exists among district approaches to this task, and what accounts for this variation?

D. In what ways are these changes related to KERA or to other influences?

E. What are the implications of these findings for state policy?

## Funding

A. Is state education funding adequate for the programs
   - mandated by KERA?
   - identified and developed by the school board, superintendent, administrators, and local schools as necessary to assist students in acquiring the capabilities and goals defined by KERA?

B. If so, how has this been achieved? If not, why not?

C. What accounts for variation among districts in their ability to adequately fund necessary programs?

D. To what extent can what occurred in the study districts relevant to funding be attributed to KERA or to other influences, such as other state funding initiatives or the district's history?

E. What are the implications of these findings for state policy?

## Interactions

A. What interactions exist among the elements of KERA?

B. How and under what conditions do such interactions occur?

C. What factors affect these interactions?

D. What priorities are being changed in local schools as a result of KERA, and what is being lost?

E. What accounts for variation in interaction of KERA components among the four study districts?

F. What are the implications of these findings for state policy?

# Appendix E

## Data Collection for 1996-2000 Research Phase

### Local District Data Collection

| Position | Number of Interviews | | | | Total |
|---|---|---|---|---|---|
| | Lamont County | Newtown Independent | Orange County | Vanderbilt County | |
| Superintendent | 2 | | | | 2 |
| Central Office Staff | | | | | |
| School Board | 1 | | | | 1 |
| FRYSC Staff | | | | | |
| Principals | 21 | 12 | 11 | 13 | 57 |
| Assistant Principals | | | | | |
| Counselors | | | 2 | | 2 |
| Teachers | | | | | |
| Primary | 31 | 15 | 22 | 32 | 100 |
| Intermediate | 35 | 23 | 16 | 28 | 102 |
| Middle School | | | | | |
| High School | 1 | | | | 1 |
| Special | | | | 1 | 1 |
| Noncertified Staff | 1 | | | | 1 |
| Students | | | | | |
| Intermediate | 22 | 18 | 17 | 30 | 87 |
| High School | | | | | |
| Parents | 14 | 16 | 11 | 19 | 60 |
| Community | 7 | 7 | 3 | 4 | 21 |
| Total | 135 | 91 | 82 | 127 | 435 |

## Local District Data Collection (continued)

| Event | Meetings Observed | | | | Total |
|---|---|---|---|---|---|
| | Lamont County | Newtown Independent | Orange County | Vanderbilt County | |
| School board | 3 | 2 | 1 | 2 | 8 |
| Faculty/staff | 3 | | | | 3 |
| SBDM council | | | | 1 | 1 |
| Total | 6 | 2 | 1 | 3 | 12 |
| Classroom Observation Hours | | | | | |
| Primary | 27.75 | 13.25 | 16.00 | 31.25 | 88.25 |
| Intermediate | 63.50 | 45.75 | 46.50 | 70.50 | 226.25 |
| Total | 91.25 | 59 | 62.50 | 101.75 | 314.50 |

## State-Level Data Collection

| State Entity | Number of Interviews | Number of Meetings Observed |
|---|---|---|
| Kentucky Department of Education | 1 | |
| Kentucky Board of Education | | 13 |
| KERA Task Force Hearing | | 1 |
| Senate Education Committee | | 2 |
| Total | 1 | 16 |

# Appendix F

## Data Collection for First Three Phases of Study (1990-91, 1991-95, 1996)

### Research Activities, 1990-91

**Local District Data Collection**

**(Vanderbilt County was not added to the study until 1991-92)**

| Position | Number of Interviews* | | | | Total |
|---|---|---|---|---|---|
| | Lamont County | Newtown Independent | Orange County | Vanderbilt County | |
| Superintendent | 4 (1) | 2 (1) | 1 | | 7 (3) |
| Central Office Staff | 2 | | 3 (1) | | 5 (3) |
| School Board | 1 | | | | 1 |
| Principals | | | 1 | | 1 |
| Individual Teacher Interviews | | | | | |
| Primary | | | | | |
| Intermediate | | | | | |
| Middle School | | | | | |
| High School | 2 | | | | 2 |
| Special | | | | | |
| KEA Representative | 1 | | | | 1 |
| Community | 1 | | | | 1 |
| **Total** | 11 | 2 | 5 | | 18 (12) |

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*Note: Two different figures are given for some role categories. The number outside the parentheses is the total number of interviews conducted. In cases where the same people were interviewed more than once during the time period, the total number of individuals interviewed is included in parentheses. For instance, the table indicates that in Lamont County there were two interviews with two different central office personnel; in Orange County, one central office person was interviewed three times.

## Research Activities, 1990-91

## Local District Data Collection (continued)

(Vanderbilt County was not added to the study until 1991-92)

| Event | Meetings Observed | | | | |
|---|---|---|---|---|---|
| | Lamont County | Newtown Independent | Orange County | Vanderbilt County | Total |
| School board | 2 | 1 | 2 | | 5 |
| District-level planning | | | 1 | | 1 |
| Principals | 1 | | | | 1 |
| Faculty/staff | | 2 | | | 2 |
| SBDM council | 1 | | 1 | | 2 |
| SDBM community | 1 | | | | 1 |
| Total | 5 | 3 | 4 | | 12 |
| **Observation Hours** | | | | | |
| Professional development | | | 4.25 | | 4.25 |
| Primary (classroom) | 2.75 | | | | 2.75 |
| Total | 2.75 | | 4.25 | | 7.50 |

### State-Level Data Collection

| Event/Activity | Number of Interviews | Number of Meetings Attended | Number of Hours Observed |
|---|---|---|---|
| Kentucky Department of Education | 1 | | |
| State Education Association | 1 | | |
| Kentucky Board of Education | | 1 | |
| Professional Development | | | 6 |
| Total | 2 | 1 | 6 |

## Research Activities, 1991-95
## Local District Data Collection

| Position | Number of Interviews | | | | Total |
|---|---|---|---|---|---|
| | Lamont County | Newtown Independent | Orange County | Vanderbilt County | |
| Superintendent | 12 | 9 | 3 | 7 | 31 |
| Central Office | 7 | 1 | 14 | 11 | 33 |
| School Board | 6 | 2 | 1 | 2 | 11 |
| FRYSC Staff | | | 22 | | 22 |
| Principals | 24 | 10 | 26 | 39 | 99 |
| Assistant Principals | | | 1 | 2 | 3 |
| Counselors | | 1 | 3 | 3 | 7 |
| Teachers | | | | | |
| Primary | 34 | 9 | 44 | 28 | 115 |
| Elementary | | | 10 | | 10 |
| Intermediate | 19 | 13 | 36 | 24 | 92 |
| Middle School | 13 | 7 | 12 | 8 | 40 |
| High School | 20 | 12 | 8 | 22 | 62 |
| Special/Other | | | 4 | 11 | 15 |
| Noncertified Staff | 2 | | | 1 | 3 |
| Students | | | | | |
| Elementary | | | 1 | 3 | 4 |
| Middle School | 4 | 1 | 2 | 3 | 10 |
| High School | 5 | 3 | 5 | 8 | 21 |
| Parents | 26 | 14 | 16 | 33 | 89 |
| Community | 8 | 1 | | 8 | 17 |
| Total | 180 | 83 | 208 | 213 | 684 |

## Research Activities, 1991-95
## Local District Data Collection (continued)

### Meetings Observed

| Event | Lamont County | Newtown Independent | Orange County | Vanderbilt County | Total |
|---|---|---|---|---|---|
| School board | 11 | 5 | 6 | 10 | 32 |
| District-level planning |  |  | 5 |  | 5 |
| Regional |  |  | 1 |  | 1 |
| Principals' | 3 |  |  |  | 3 |
| Faculty/staff | 8 | 6 | 2 | 14 | 30 |
| SBDM council | 33 | 26 | 29 | 78 | 166 |
| SBDM community | 5 | 1 | 2 | 8 | 16 |
| SBDM elections | 1 |  |  | 6 | 7 |
| Special district/school events | 1 | 1 | 1 | 3 | 6 |
| Parent meeting/events | 6 | 2 | 3 | 10 | 21 |
| Community events | 2 |  |  |  | 2 |
| FRYSC observation (# of visits) |  |  | 9 |  | 9 |
| Total | 70 | 41 | 58 | 129 | 298 |

### Observation Hours

| | | | | | |
|---|---|---|---|---|---|
| Primary | 22.25 | 20.75 | 45.00 | 28.25 | 116.25 |
| Elementary | .50 |  |  | .25 | .75 |
| Intermediate | 5.75 | 3.25 | 10.75 | 7.50 | 27.25 |
| Middle school | 12.25 | 5.50 | 15.75 | 15.25 | 48.75 |
| High school | 10.50 | 12.00 | 12.00 | 13.25 | 47.75 |
| Professional Development | 45.00 | 24.75 | 53.25 | 39.00 | 162.00 |
| ESS | 7.75 | 2.00 | 5.50 | 6.25 | 21.50 |
| Total | 104 | 68.25 | 142.25 | 109.75 | 424.25 |

## Research Activities, 1991-95

### State Level Data Collection

| State Entity | Number of Interviews | Number of Meetings Observed | Number of Hours Observed |
|---|---|---|---|
| Kentucky Department of Education | 8 | | |
| Other state-level interviews[1] | 7 | | |
| Legislature (committees) | | 6 | |
| Kentucky Department of Education / (regional hearings/briefings) | | 4 | |
| Kentucky Board of Education | | 16 | |
| Other meetings[2] | | 2 | |
| Professional developments/events | | | 20.25 |
| Total | 15 | 28 | 20.25 |

1. Kentucky Education Association, Learning Resource Center, Prichard Committee, Family Foundation, Cabinet for Human Resources, ACT representative

2. KASA conference, press conference

## Research Activities, 1995-96
## Local District Data Collection

| Position | Number of Interviews* | | | | Total |
|---|---|---|---|---|---|
| | Lamont County | Newtown Independent | Orange County | Vanderbilt County | |
| Superintendent | 2 (1) | 1 | 1 | 1 | 5 (4) |
| Central Office | 2 (1) | 1 | 3 | 2 | 8 (7) |
| School Board | 3 | 2 | 1 | 3 | 9 |
| Principals | 5 | 2 | 7 | 5 | 19 |
| Counselors | 1 | | | | 1 |
| Teachers | | | | | |
| Primary | 5 | 1 | 6 | 3 | 15 |
| Intermediate | 3 | 2 | 5 | 6 | 16 |
| Middle School | 4 | 3 | 3 | 3 | 13 |
| High School | 4 | 3 | 2 | 3 | 12 |
| Special | 2 | | 5 | 3 | 10 |
| Noncertified Staff | 5 | 1 | 7 | 5 | 18 |
| Parents | 2 | 1 | 1 | 3 | 7 |
| Total | 38 (36) | 17 | 41 | 37 | 133 (131) |

*Note: Two different figures are given in some instances. The number outside the parentheses is the total number of interviews conducted. In cases where the same people were interviewed more than once during the time period, the total number of individuals interviewed is included in parentheses. For instance, the table indicates that in Lamont County there were two interviews with a single superintendent and two interviews with a single central office person.

## Research Activities, 1995-96
## Local District Data Collection (continued)

| | Meetings Observed | | | | |
|---|---|---|---|---|---|
| Event | Lamont County | Newtown Independent | Orange County | Vanderbilt County | Total |
| School board | | 1 | 2 | | 3 |
| SBDM council | | 1 | 2 | 2 | 5 |
| Total | | 2 | 4 | 2 | 8 |

## State-Level Data Collection

| State Entity | Number of Interviews | Number of Meetings Observed |
|---|---|---|
| Kentucky Department of Education | 5 | |
| Other state-level interviews | | |
| Anti-KERA organizers | 2 | |
| KEA representative | 2 | |
| KASA representative | 4 | |
| Prichard Committee representative | 1 | |
| Family Foundation represenative | 1 | |
| University of Kentucky research director | 1 | |
| University of Louisville research director | 1 | |
| KSBA representative | 1 | |
| Kentucky Board of Education members | 5 | |
| Legislators | 4 | |
| Kentucky Board of Education | | 2 |
| Total | 27 | 2 |

# Appendix G

# Interview Protocols, 1996-2000 Research Phase

## 1996-97–Third Grade (Final Year of Primary)

### First Teacher Interview, 1996-97

**Points to Cover Initially**

1. How much time for interview? (Make a note of it and stick to the time limitation.)
2. Concerns, questions, comments about the study?
3. Document collection system (get it set up).
4. Best/worst days and times for us to visit, and why?

   (Make clear that we want to visit on different days to see what goes on but that we will make every effort to accommodate them.)
5. Best way to obtain information from teacher each visit: planning period? 15 minutes after school? Follow-up phone call?
6. Where to locate ourselves in classroom for least disruption (near an outlet)?
7. Rules for interacting with students (we want to observe, primarily).
8. Inform parents and students of study.
9. If possible, obtain a copy of classroom schedule (daily/weekly).

**If Time Is Left after This—**

Move to "Class of 2006" questions from teacher interview protocol.

If time is left after that, end the interview (no sense in getting into another category of questions—this is enough for the first visit).

## Interview Protocol, 1996-97: Classroom Teacher

### Background

1. Are you a native of this county?
    - If so, did you attend public schools here?
    - If not, where are you from and did you attend public schools there?
2. Do you have children enrolled in public schools here?
    - Ages and schools attending?
3. Describe your professional training (colleges, rank, etc.).
4. Describe your teaching background up to this point (grades/ subjects taught, etc.).

### Class of 2006

5. What effects has KERA had on the students you teach, both positive and negative?
    - How can you teli?
6. How would you characterize the class of 2006 (e.g., generally above average, average, below average)?
7. Is this group of students typical of other groups you have taught over the past few years, or are their differences we need to be aware of?
8. How many, if any, special education students are in this class?
    - What category of exceptionality are those students (e.g., LC, FMD, etc.)?
    - How much time do those students spend in your room, and for what purposes (e.g, for center time only, fully integrated, etc.)?
    - How are their special needs addressed (e.g., special education teacher collaborating in room, students pulled out)?
    - Do they occupy more or less of your time than the average student?
9. How many, if any, gifted students are in this class?
    - How are their special needs addressed (e.g., gifted/talented teacher collaborating in room, students pulled out)?
    - Do they occupy more or less of your time than the average student?

### Curriculum and Instruction

10. Has KERA changed what you do as a teacher in any way? If so,

what and how? If not, why not?

**Probes:** Curriculum, instructional practices (explore ways they did or did not change initially and any subsequent changes resulting in current practices)

11. To what do you attribute the changes (or lack of changes) you have made?

    **Probes:** Primary program critical attributes, professional development, principal or district leadership, own belief systems, perceptions of benefits or lack of benefit for students, parent resistance/ support, KIRIS, etc.

12. What is your reaction to the expectation that all children can achieve at high levels?
    - Has this expectation affected what you do in the classroom? If so, how?
13. Describe your basic instructional approach for each of the subjects you teach.

    **Probes:** Instructional materials employed, packaged curriculum materials (such as Box/Bag, Success, etc.), teacher vs. student directed, project work, portfolio tasks, team teaching

14. How often and for what purposes do your students use computer technology?
15. How closely (or not) do you stick to the classroom schedule?
16. What sort of support staff or volunteers do you have (e.g., aides, parent volunteers, older students as tutors)?
17. Does the principal visit your classroom?
    - If so, how often?
    - For what purposes?

**Student Grouping**

18. Have student grouping practices in your classroom or in this school changed since KERA? If so, how?
    - To what do you attribute the changes?

**If Not Answered in Question 18 Above:**

19. How were students assigned to your classroom?
20. How and when are they grouped within the classroom?
21. Is there any movement of students or teachers between classrooms?

**Assessment Practices**

22. Have your assessment practices changed since KERA? If so, how?

- To what do you attribute the changes?

**If Not Answered in Question 22 Above:**

23. What sort of assessments do you use most often in the classroom (e.g, teacher made, KIRIS released items, commercial tests, performance events)?

24. What is the most common format of your assessments (pencil/paper, oral, performance, observation, etc.)?

25. What are the item types you use most commonly in assessment (multiple choice, open response, etc.)?

**Parent/Community Involvement**

26. Has the extent of parent and community involvement changed in this school or your classroom since KERA?
    - If so, how?
    - To what do you attribute the changes?

**If Not Answered in Question 26 Above:**

27. How do you report student progress to parents?
    - How often?

28. To what extent are parents involved in your classroom and at this school?

29. How are parents informed of school/classroom activities?

30. What activities are there at this school or in your room, if any, for community outreach or involvement?

**Decision Making**

31. How do you determine what to teach and how to teach it?

    **Probes:** Individual choice, teacher team decisions, SBDM council, KIRIS directed, STP, principal edicts, district-aligned curriculum

32. Have those methods of making decisions about your curriculum and instruction changed since KERA? If so, how did you do it before?
    - To what do you attribute the changes?

33. How much planning time during the day do you receive?
    - How is it spent (individual, team, etc.)?
    - When do you do most of your planning (planning time, at home, after school, etc.)?

34. Has the amount of planning time and the way you use it changed since KERA? If so, how was that handled before?

**Closing**

35. Is there anything more you would like to comment on?

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## First Principal Interview, 1996-97

### Points to Cover Initially

1. How much time for interview? (Make a note of it and stick to the time limitation.)
2. Concerns, questions, comments about the study?
3. Document collection system:
    - How to reimburse for copy costs
    - Setting up office mailbox
    - Getting copies of council minutes (may need to talk to council secretary about this)
4. Best/worst days and times for us to visit, and why?

    (Make clear that we want to visit on different days to see what goes on but that we will make every effort to accommodate the principal.)
5. Rules for interacting with students (we want to observe, primarily).
6. Informing parents and students of study.
7. Obtain copy of schoolwide schedule (showing teacher planning times, lunch periods, etc.).

### If Time Is Left after This—

Move to "Teachers of Class of 2006" questions from principal interview protocol. Proceed chronologically through other questions if time permits.

## Interview Protocol, 1996-97: Principal

### Background

1. Are you a native of this county?
    - If so, did you attend public schools here?
    - If not, where are you from and did you attend public schools there?
2. Do you have children enrolled in public schools here?
    - Ages and schools attending?
3. Describe your professional training (colleges, rank, etc.).
4. Describe your teaching and administrative background up to this point (grades/subjects taught, schools, etc.).

### Teachers of Class of 2006

5. Given what you know about the current teachers of the class of 2006, what kinds of things would you expect us to see in their classrooms this year?

    **Probes:** Traditional, textbook based, and teacher directed? KERA and KIRIS influenced? Lots of hands-on? Student-directed learning? Group work?

6. How does this compare with what is happening at other grade levels in this school?
7. Do the practices you described represent a change for these teachers since KERA? If so, in what way?
8. To what do you attribute the approaches used by these teachers?

    **Probes:** State mandates? KIRIS? Your leadership? District requirements? Professional development/lack of professional development? School Transformation Plan? Teacher beliefs?

9. How do you characterize teacher-student relations in each of these classrooms?

### Students in Class of 2006

10. Do you have any feel for how KERA has affected students in the class of 2006? If so, describe.
11. How would you characterize this group of students (e.g., generally above average, average, below average)?
12. Is this group of students typical of other groups in the school, or are there differences we need to be aware of?

### Curriculum and Instruction

13. Has this school changed as a result of KERA? If so, how? If not, why not? (Or to state it more gently: Was the school already doing KERA-like things, or did it have success with existing methods?)

    **Probes:** Curriculum, instructional practice (explore ways they did or did not change initially and any subsequent changes resulting in the current curriculum).

    - To what do you attribute the changes?

14. Does the school have a particular instructional focus at this point, such as a focus on science, math, writing, subject integration?

    - If so, what was the basis for deciding to focus on those things?
    - How are teachers being encouraged to maintain that focus?

    **Probes:** Professional Development activities, STP directives

15. What sort of computer technology is available in the school (e.g., lab, classroom computers, number of computers per student)?
16. What sort of support staff or volunteers work at this school and whom do they assist (e.g., aides, parent volunteers, older students as tutors, etc.)?
17. Do you have much opportunity to visit classrooms?

    - If so, how often and for what purposes?

### Principal Beliefs/Practices

18. Have your own beliefs and practices been influenced by KERA? If so, how? If not, why not?
19. To what do you attribute the changes or lack of changes?

### Student Assignment

20. Have student grouping practices in this school changed since KERA? If so, how?

    - To what do you attribute the changes?

### If Not Answered in Question 20 Above:

21. How are students assigned to classes in this school?
22. How are they grouped within the classroom (any schoolwide strategy?)
23. Is there any movement of students or teachers among classrooms?

### Assessment Practices

24. Have the school's assessment practices changed since KERA? If so, how?

    - To what do you attribute the changes?

**If Not Answered in Question 24 Above:**

25. Are there any schoolwide requirements with regard to assessment (such as requiring OR questions on tests)? If so, describe.
26. What sort of assessments, if any, does the school or district require of teachers?
27. What is the most common format of teacher assessments (pencil/paper, oral, performance, observation, etc.)?
28. What are the item types teachers use most commonly in assessment (multiple choice, open response, etc.)?

**Parent/Community Involvement**

29. Has the extent of parent and community involvement in this school changed since KERA?
    - If so, how?
    - To what do you attribute the change?

**If Not Answered in Question 29 Above:**

30. How is student progress reported to parents? How often?
31. To what extent are parents involved at this school?
32. How are parents informed of school activities?
33. What activities are there at this school, if any, for community outreach or involvement?

**Decision Making**

34. How do teachers determine what to teach and how to teach it?

    **Probes:** Individual choice, teacher team decisions, SBDM council, KIRIS directed, School Transformation Plan, principal edicts, district-aligned curriculum
35. Have those methods of making decisions about your curriculum and instruction changed since KERA? If so, how was it done before?
    - To what do you attribute the changes?
36. How much planning time do teachers receive during the school day?
    - How is it spent (individual, team, etc.)?
37. Has the amount of planning time and the way it is used changed since KERA? If so, how?

**Closing**

38. Is there anything more you would like to comment on?

## 1997-98–Fourth Grade

### First Teacher Interview, 1997-98

**Points to Cover Initially**

1. How much time for interview? (Make a note of it and stick to the time limitation.)
2. Concerns, questions, comments about the study?
3. Document collection system (get it set up).
4. Best/worst days and times for us to visit, and why?

   (Make clear that we want to visit on different days to see what goes on but that we will make every effort to accommodate the teacher.)
5. Best way to obtain information from teacher each visit: planning period? 15 minutes after school? Follow-up phone call?
6. Where to locate ourselves in classroom for least disruption (near an outlet)?
7. Rules for interacting with students (we want to observe, primarily).
8. Informing parents and students of study.
9. If possible, obtain a copy of their classroom schedule (daily/weekly).

**If Time Is Left after This—**

Move to "Class of 2006" questions from teacher interview protocol.

If time is left after that, end the interview (no sense in getting into another category of questions—this is enough for the first visit).

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## Interview Protocol, 1997-98: Classroom Teacher

### Background

1. Are you a native of this county?
    - If so, did you attend public schools here?
    - If not, where are you from and did you attend public schools there?
2. Do you have children enrolled in public schools here?
    - Ages and schools attending?
3. Describe your professional training (colleges, rank, etc.).
4. Describe your teaching background up to this point (grades/subjects taught, etc.).

### Class of 2006

5. What effects has KERA had on the students you teach, both positive and negative?
    - How can you tell?
6. How would you characterize the class of 2006 (e.g., generally above average, average, below average)?
7. Is this group of students typical of other groups you have taught over the past few years, or are there differences we need to be aware of?

*Consider Inserting Questions about the Individual Students We Are Tracking*

### Curriculum and Instruction

8. Has KERA changed what you do as a teacher in any way? If so, what and how? If not, why not?

    **Probes:** Curriculum, instructional practices (explore ways they did or did not change initially and any subsequent changes resulting in current practices).

9. To what do you attribute the changes (or lack of changes) you have made?

    **Probes:** Professional development, principal or district leadership, own belief systems, perceptions of benefits or lack of benefit for students, parent resistance/support, KIRIS, etc.

10. What is your reaction to the expectation that all children can achieve at high levels?
    - Has this expectation affected what you do in the classroom? If so, how?

11. Describe your basic instructional approach for each of the subjects you teach.

    **Probes:** Instructional materials employed, packaged curriculum materials (such as Box/Bag, Success, etc.), teacher vs. student directed, project work, portfolio tasks, team teaching

12. How often and for what purposes do your students use computer technology?
13. What sort of support staff or volunteers do you have (e.g., aides, parent volunteers, older students as tutors)?
14. Does the principal visit your classroom?
    - If so, how often?
    - For what purposes?

**Student Grouping**

15. Have student grouping practices in your classroom or in this school changed since KERA?
    - If so, how?
    - To what do you attribute the changes?

**If Not Answered in Question 15 Above:**

16. How were students assigned to your classroom?
17. How and when are they grouped within the classroom?
18. Is there any movement of students or teachers between classrooms?

**Assessment Practices**

19. Have your assessment practices changed since KERA? If so, how?
    - To what do you attribute the changes?

**If Not Answered in Question 19 Above:**

20. What sort of assessments do you use most often in the classroom (e.g, teacher made, KIRIS released items, commercial tests, performance events)?
21. What is the most common format of your assessments (pencil/paper, oral, performance, observation, etc.)?
22. What are the item types you use most commonly in assessment (multiple choice, open response, etc.)?

**Parent/Community Involvement**

23. Has the extent of parent and community involvement changed in

this school or your classroom since KERA? If so, how?

- To what do you attribute the changes?

**If Not Answered in Question 23 Above:**

24. How do you report student progress to parents?
    - How often?
25. To what extent are parents involved in your classroom and at this school?
26. How are parents informed of school/classroom activities?
27. What activities are there at this school or in your room, if any, for community outreach or involvement?

### Decision Making

28. How do you determine what to teach and how to teach it?

    **Probes:** Individual choice, teacher team decisions, SBDM council, KIRIS directed, STP, principal edicts, district-aligned curriculum
29. Have those methods of making decisions about your curriculum and instruction changed since KERA? If so, how did you do it before?
    - To what do you attribute the changes?
30. How much planning time during the day do you receive?
    - How is it spent (individual, team, etc.)?
    - When do you do most of your planning (planning time, at home, after school, etc.)?

### Added Questions for January 1998

- What is your reaction to the school's KIRIS scores from last year (why did they go up/down)?
- How do you prepare your students for the KIRIS test?

  **Probes:** Do you use released KIRIS items? When do you begin preparation? Are there any school requirements? Do you have any specific strategies for reaching your goal? Do you offer incentives during testing week?
- Do you or your students feel stressed by the testing?
- What will it take for this school to reach/keep reaching its threshold score?
- Describe your basic instructional approach for writing.

  **Probes:** How often do your students write? Was that true of the beginning of the year? For what purposes and in what subjects?

What kinds of pieces? Revision or a new piece every day? Extent of integration?

- Describe the process for producing a portfolio piece.

  **Probes:** How are topics chosen? Where do you get prompts? How much revising? How much conferencing with teacher, peers, or parents? How much do students use the computer for the portfolio and at what stage? How is it decided which pieces get into the final portfolio? How have the new guidelines changed the process?

**Closing**

31. Is there anything more you would like to comment on?

## First Principal Interview, 1997-98

### Points to Cover Initially

1. How much time for interview? (Make a note of it and stick to the time limitation.)
2. Concerns, questions, comments about the study?
3. Document collection system:
   - How to reimburse for copy costs
   - Setting up office mailbox
   - Getting copies of council minutes (may need to talk to council secretary about this)
4. Best/worst days and times for us to visit, and why?

   (Make clear that we want to visit on different days to see what goes on but that we will make every effort to accommodate the principal.)
5. Rules for interacting with students (we want to observe, primarily).
6. Informing parents and students of study.

### If Time Is Left after This—

Move to "Teachers of Class of 2006" questions from principal interview protocol. Proceed chronologically through other questions if time permits.

## Interview Protocol, 1997-98: Principal

### Background

1. Are you a native of this county?
    - If so, did you attend public schools here?
    - If not, where are you from and did you attend public schools there?
2. Do you have children enrolled in public schools here?
    - Ages and schools attending?
3. Describe your professional training (colleges, rank, etc.).
4. Describe your teaching and administrative background up to this point (grades/subjects taught, schools, etc.).

### Teachers of Class of 2006

5. Given what you know about the current teachers of the class of 2006, what kinds of things would you expect us to see in their classrooms this year?

    **Probes:** Traditional, textbook based, and teacher directed? KERA and KIRIS influenced? Lots of hands-on? Student-directed learning? Group work?

6. How does this compare with what is happening at other grade levels in this school?
7. Do the practices you described represent a change for these teachers since KERA? If so, in what way?
8. To what do you attribute the approaches used by these teachers?

    **Probes:** State mandates? KIRIS? Your leadership? District requirements? Professional development/lack of professional development.? School Transformation Plan? Teacher beliefs?

9. How do you characterize teacher-student relations in each of these classrooms?

### Students in Class of 2006

10. Do you have any feel for how this group will do as fourth graders?

### Curriculum and Instruction

11. Does the school have a particular instructional focus at this point, such as a focus on science, math, writing, subject integration?
    - If so, what was the basis for deciding to focus on those things?

- How are teachers being encouraged to maintain that focus?

**Probes:** Professional development activities, School Transformation Plan directives

12. What is your reaction to your school's KIRIS/CTBS scores?
13. What is the status of computer technology this year (e.g., lab, classroom computers, number of computers per student)?
14. What sort of support staff or volunteers work at this school and whom do they assist (e.g., aides, parent volunteers, older students as tutors, etc.)?
15. Do you have much opportunity to visit classrooms?
    - If so, how often and for what purposes?

**Principal Beliefs/Practices**

16. Last year, I asked how your own beliefs and practices had been influenced by KERA, and you said ________. Has your outlook changed since then? If so, how and why?

**Student Assignment**

17. Last year, I asked you how students are assigned to classes in this school, and you told me ______________. Is this still the case?
18. Is there any schoolwide strategy for how students should be grouped within the classroom?

**Assessment Practices**

19. Are there any schoolwide requirements with regard to assessment (such as requiring OR questions on tests)? If so, describe.
20. What sort of assessments, if any, does the district require of teachers?
21. What is the most common format of teacher assessments (pencil/paper, oral, performance, observation, etc.)?
22. What are the item types teachers use most commonly in assessment (multiple choice, open response, etc.)?

**Parent/Community Involvement**

23. To what extent are parents involved at this school this year?
24. How are parents informed of school activities?
25. What activities are there at this school, if any, for community outreach or involvement?

### Decision Making

26. How do teachers determine what to teach and how to teach it?

    **Probes:** Individual choice, teacher team decisions, SBDM council, KIRIS directed, STP, principal edicts, district-aligned curriculum

27. How much planning time do teachers receive during the school day?

    - How is it spent (individual, team, etc.)?

### Added Questions for January 1998

- What is your reaction to the school's KIRIS scores from last year?
- How do you prepare your students for the KIRIS test?

  **Probes:** Do you use released KIRIS items? When do you begin preparation? Are there any school requirements? Do you have any specific strategies for reaching your goal? Do you offer incentives during testing week?

- Might I observe administration?
- Do teachers or students feel stressed by the testing?
- What will it take for this school to reach/keep reaching its threshold score?
- Describe the basic instructional approach for writing.

  **Probes:** How often do students write? Was that true at the beginning of the year? For what purposes and in what subjects? What kinds of pieces? Revision or a new piece every day? Extent of integration?

- Describe the process for producing a portfolio piece.

  **Probes:** How are topics/prompts chosen? How much revising? How much conferencing with teacher, peers, or parents? How much do students use the computer for the portfolio and at what stage? How is it decided which pieces get into the final portfolio? How have the new guidelines changed the process?

### Closing

28. Is there anything more you would like to comment on?

## Interview Protocol, 1997-98: Parents

### Background

1. Are you a native of this county?
    - If so, did you attend public schools here?
    - If not, where are you from and did you attend public schools there? How long have you lived here?
2. What did you do after high school? (See if we can find this out from teachers.)
3. How old are your children, and what schools do they attend?
4. What is your occupation? (See if we can find this out from teachers.)

### The Student

5. What do you think of the education your child has been getting so far at this school?

    **Probe:** Ungraded primary? Multiage?
6. Has your child been allowed to learn at his/her own pace, or does the teacher try to keep everyone together?
    - How can you tell?
7. Has your child learned as much as you would have expected by this time?
8. Does your child enjoy school?
    - Does he or she enjoy this classroom?
    - What, specifically, does the child like or dislike about the school or classroom?
9. How has your child been doing in school?
    - How do you know?

    **Probe:** Any differences between primary and fourth grade
    - in how your child has been doing?
    - in how you've been notified of your child's progress?
10. Does your child move from teacher to teacher during the day?
    - Does he or she have the same teacher for the basics of reading, math, social studies, and science?

### School Support Services

11. Does your child's school have a Family Resource Center (FRC)?

- If so, have you or your child taken advantage of its programs or services?
- If so, how did you feel about it?

12. Has your child been involved in the extended school program/after-school tutoring?
    - If so, was it helpful? In what way?
13. Is your child involved in special or after-school activities, such as athletics, music, recreation?
    - If so, describe (including who sponsors the activity).

### The School

14. What do you think about your child's school (the child in the class of 2006)?

    **Probes:** Principal, teachers, facility staff, other staff, what is taught, how it is taught, relations with parents (whatever was not covered above)
15. Do you have any feel for how (or if) this school or the teachers have changed since KERA was passed? If so, explain.
    - How do you feel about the changes or lack of changes?
16. What kinds of things has your child been learning/doing so far this year?

    **Probes:** Cursive writing, multiplication, field trips, science projects, mapping (anything else you can think of to get the parent thinking)
    - Is this different from your school experience or that of your older children?
    - If so, how? How do you feel about the changes?
17. What sort of activities does your child do for school, and in which subjects?

    **Probes:** Homework, pencil/paper activities, extended projects, hands-on activities, group work, portfolios, textbooks, worksheets
    - Is this different from your school experience or that of your older children?
    - If so, how? How do you feel about the changes?
18. What kinds of tests does your child take at school?

    **Probes:** Multiple choice, open response, essay, demonstrations of knowledge
    - How often do they take tests?

- Is this different from your school experience or that of your older children?
- If so, how? How do you feel about the changes?

19. How does the teacher report to you about your child's progress in school?

    **Probes:** Conferences, report cards, papers sent home, homework sent home

    - Is this different from your school experience or that of your older children?
    - If so, how? How do you feel about the changes?

20. Are you informed of classroom and school activities? If so, how?

    **Probes:** Newsletters, notes home, information line

    - Is this different from your school experience or that of your older children?
    - If so, how? How do you feel about the changes?

21. What kind of involvement have you had with your child's school?

    **Probes:** Volunteer, council/committee member, PTA/PTO

22. What kind of involvement have you had in your child's classroom this year?

    **Probes:** Volunteer, room mother, field trips

23. Has your child's teacher requested the parents' help in any way so far this year? If so, describe.

24. Does your child bring schoolwork home? If so, what kinds of work?

    - Is your help required on the work? If so, how do you feel about that?

25. Do you feel welcome at school?

    - Do you feel welcome in your child's classroom?

## Closing

26. Is there anything more you would like to comment on?

## Interview Protocol, 1997-98: Students

### Background

1. How old are you?
2. Do you have any brothers or sisters?
    - If so, how old are they?
    - Do they go to this school?
3. Have you ever attended another school besides this one?

### Attitudes toward School

4. Do you like school?
    - What are your favorite parts? Why?

    **Probe:** Classroom information (if they say recess or something like that)

    - What do you like about (things identified)?
    - What parts don't you like? Why?

    **Probe:** Classroom information

    - What do you not like about (things identified)?
5. Favorite and least favorite teachers? Why?
6. Favorite grown-up in this school? Why?

### Student Achievement

7. Is your schoolwork hard or easy?

    **Probe:** Specifics on subjects and types of assignments that are easy or difficult.
8. How does the teacher let you know if you do well or not so well?
    - How does he or she let your parents know?
9. What do you like/not like about (subjects not discussed)?

### Curriculum, Instruction, Assessment

10. What kind of tests do you have?

    **Probe:** Item types
11. Has your teacher talked to you about the KIRIS test?
    - Do you practice for KIRIS?

    **Probe:** Open-response questions

12. Do you ever (for each of these, ask: In what subjects? What is it like?)

    - Writing assignments?

    **Probe:** What kind—stories, journals, letters? What do you do with this writing? Does anyone read it besides the teacher?

    - Work in groups or with a partner?
    - How does the teacher decide who is in a group or who is partners with whom?
    - Work on computers?
    - Experiments or projects?
    - Go on field trips?

13. Does everyone in your room do the same kinds of work at the same time (such as read in the same book during reading time or do the same worksheets for math)?

    - Do some kids do easier work and others harder?
    - Which groups are you in?

14. Do you or other children go to other teachers?

    - If so, where do they go and why?

15. Can you get up and move around the room to get something or ask for help without asking the teacher's permission?

16. What rules do you have in the classroom?

    - What happens if someone breaks the rules?

17. Who is the principal?

    - When do you see him/her?
    - Does he or she visit this room? How often? What does he or she do while here?
    - Do you like him or her? Why or why not?

**Parent Involvement**

18. Do parents ever come to your room?

    - If so, what do they do?
    - How often do they come?

19. Does your mom or dad ever come to this room?

    - How often?
    - For what?

**Support Services**

20. Do you ever stay for the after-school tutoring?
    - How often?
    - What do you do while you are there?
    - Has it helped you do better in school?
21. Is there a family resource center at this school or close by?
    - Have you been there? If so, why?

    **Probe:** Go to nurse? After-school care?

    - Have you been to any of its programs or activities? Which ones?
22. What kinds of things do you do after school?
    - Tell me about it.
23. What kinds of things do you like to do?

**Closing**

24. Anything more you think I should know about you or this school?

## 1998-99–Fifth Grade

### First Teacher Interview, 1998-99

**Points to Cover Initially**

1. How much time to talk? (Make a note of it and stick to the time limitation.)
    - Find out if they can communicate by e-mail; get address.
2. Explain 1998-99 fieldwork plan.
    - Concerns, questions, comments about the study?

    (Specifically, gauge their willingness to participate in evening focus group.)

    - Procedures for reporting suspected abuse.
3. Ask for names of influential community members we might interview.
4. Where to locate ourselves in classroom for least disruption (near an outlet)?
5. Rules for interacting with students (we want to observe, primarily).
6. If possible, obtain a copy of their classroom schedule (daily/weekly).

**If Time Is Left after This—**

7. What is new this year that I should be aware of?
    - Reactions to new assessment/accountability program?
    - Anything going on with this class or the faculty or district (leadership issues; major faculty initiatives, such as a schoolwide professional development effort; curriculum alignment; or some major issue before SBDM council or with parents—that sort of thing)?
8. What is the structure of the fifth grade program (departmentalized, self-contained, etc.)?
9. How would you characterize the class of 2006 (e.g., generally above average, average, below average)?
10. Is this group of students typical of other groups you have taught over the past few years, or are there differences we need to be aware of?
11. Any other comments?

## Interview Protocol, 1998-99: Classroom Teacher

### Teacher Practices/Beliefs

1. Describe your basic instructional approach for each of the subjects you teach.

   **Probes:** instructional materials employed, packaged curriculum materials, teacher vs. student directed, project work, portfolio tasks, team teaching

2. Contrast your current teaching style to your style when you first began teaching.

3. To what do you attribute the changes (or lack of changes) you have made over time in your teaching approaches?

   **Probes:**

   - KERA? How so?
   - Professional development? If so, what kinds had the greatest impact?
   - Preservice training include a subject-matter specialty? Preservice training influence approaches?
   - Member of professional organizations or networks? If so, how influential?
   - Principal or district leadership?
   - Own belief system?
   - Saw benefits or lack of benefit for students?
   - Parent resistance/support?
   - KIRIS?

4. What are your goals for these students this year?

5. What is your reaction to the expectation that all children can achieve at high levels?

   - What about if phrased "All can achieve, and most at high levels?"
   - Has this expectation affected what you do in the classroom? If so, how?

6. How often and for what purposes do your students use computer technology?

7. What sort of assessments do you use most often in the classroom (e.g, teacher made, KIRIS released items, commercial tests with multiple-choice questions, performance events)?

8. How and when are students grouped within the classroom?

### Decision Making

9. How do you determine what to teach and how to teach it?

   **Probes:** Individual choice, teacher team decisions, SBDM council, KIRIS directed, STP, principal edicts, district-aligned curriculum

10. Have those methods of making decisions about your curriculum and instruction changed since KERA? If so, how did you do it before?
    - To what do you attribute the changes?
11. School transformation/consolidated plan: How developed/used?

### Rural

12. Do you consider this a rural school?
    - If not, why not?
    - If so, what does that mean to you?

    **Possible Probes:** How is school different from urban/suburban? Is it more like or more different from urban/suburban schools?

### Parent/Community Involvement

13. How do you report student progress to parents?
    - How often?
14. To what extent are parents involved in your classroom and at this school?
15. How are parents informed of school/classroom activities?
16. What activities are there at this school or in your room, if any, for community outreach or involvement?

### Background

17. Are you a native of this county?
    - If so, did you attend public schools here?
    - If not, where are you from and did you attend public schools there?
18. Do you have children enrolled in public schools here?
    - Ages and schools attending?
19. Describe your professional training (colleges, rank, etc.).
20. Describe your teaching background up to this point (grades/subjects taught, etc.).

### Closing

21. Is there anything more you would like to comment on?

### Questions Added for Spring 1999:

### Writing

- Have your students done writing or math portfolios this year?
- If not, how much and what kind of writing has the fifth grade done, and in what subject areas (possibly compared to fourth grade)?
- Who is considered a lead teacher in writing in this building (who would you go to for help on writing)?
- What sort of training have you had to teach writing?

### What Should Schools Teach?

- What should schools teach local youth by the time they graduate from high school?
- Does that apply to ALL students?
- If not, what do schools do with the ones who won't/can't learn those things?

### Target Students

- How has the (target student) done in school this year?
- What have been his or her areas of strength and areas of interest?
- What have been his or her weak areas or things not interested in?
- What sort of instructional approaches seem to work best for the student?
- What sort of contact have you had with the student's parent/guardian this year?
- What will be the greatest help/hindrance to the student as he or she continues his or her schooling?
- Anything more to add on the student?

## First Principal Interview, 1998-99

### Points to Cover Initially

1. How much time for interview? (Make a note of it and stick to the time limitation.)
    - Is e-mail communication a possibility?
2. Explain 1998-99 fieldwork plan.
    - Concerns, questions, comments about the study?
3. Ask for names of three to four influential community leaders we might interview.
4. Explain our policy for reporting incidents of abuse.
5. Collect the following information:
    - This year's enrollment
    - Percentage free/reduced-price lunch
    - Percentage minority
    - School schedule
    - Staff list
    - Fifth-grade class list

### If Time Is Left after This—

6. What is new this year that I should be aware of?
    - Reactions to new assessment/accountability program?
    - Anything going on with this class or the faculty or district (leadership issues; major faculty initiatives, such as a schoolwide professional development effort; curriculum alignment; or some major issue before SBDM council or with parents—that sort of thing)?
7. How are things going at the fifth-grade level so far?
8. Is transition from fourth to fifth an issue (i.e., are teaching styles a lot different?)?
9. Any other comments, questions?

## Interview Protocol, 1998-99: Principal

### Teachers of Class of 2006

1. Given what you know about the current fifth-grade teachers, what kinds of things would you expect us to see in their classrooms this year?

   **Probes:** Traditional, textbook based and teacher directed? KERA and KIRIS influenced? Lots of hands-on? Student-directed learning? Group work?

2. How does this compare with what is happening at other grade levels in this school?
3. Do the practices you described represent a change for these teachers since KERA? If so, in what way?
4. To what do you attribute the approaches used by these teachers?

   **Probes:** State mandates? KIRIS? Your leadership? District requirements? Professional development/lack of professional development? School Transformation Plan? Teacher beliefs?

5. How do you characterize teacher-student relations in each of these classrooms?

### Curriculum and Instruction

6. Does the school have a particular instructional focus at this point, such as a focus on science, math, writing, subject integration?
   - If so, what was the basis for deciding to focus on those things?
   - How are teachers being encouraged to maintain that focus?

   **Probes:** Professional development activities, School Transformation Plan directives

7. School Transformation Plan/consolidated plan: How developed/used?
8. What is the status of computer technology this year (e.g., lab, classroom computers, number of computers per student)?
9. What sort of support staff or volunteers work at this school and whom do they assist (e.g., aides, parent volunteers, older students as tutors)?

### Assessment Practices

10. Are there any school or district requirements with regard to assessment (such as requiring OR questions on tests)? If so, describe.

### Rural

11. Do you consider this a rural school?
    - If not, why not?
    - If so, what does that mean to you?

    **Possible Probes:** How is this school different from urban/suburban schools? Is it more like or more different from urban/suburban schools?

### Parent/Community Involvement

12. To what extent are parents involved at this school this year?
13. How are parents informed of school activities?
14. What activities are there at this school, if any, for community outreach or involvement?

### Closing

15. Is there anything more you would like to comment on?

### Additional Questions for Principals, Spring 1999:

### Writing

1. How are portfolios scored (math—if applicable—and writing)?
2. Who is considered a lead teacher in the field of writing in school and/or district?
    - If so, did they receive special professional development in this area? Describe.
3. Is there substantive writing going on in subject areas other than language arts?
4. What efforts are the school/district making to help teachers in other content areas, or non-fourth-grade elementary teachers, teach writing?
5. Do you do portfolios in grade 5 (math and/or writing)?

### *Traditional/KERA Pattern of Schooling

Provide an explanation similar to the following as a lead-in to this question: We have been reading a lot of the education research as we have begun to analyze the data from our study. Researchers have identified certain features of schooling that have been very resistant to change no matter what sort of reform effort is tried. KERA was designed to change many of these features of schooling, but we have seen that they have been difficult to change in Kentucky and elsewhere. These features, as well as the KERA contrast, are listed on Handout 1. I would like to go down the list and get your reactions. (Then have the respondent read each contrasting pair and give his or her reaction.)

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* Note: This question requires Handout 1.

### *Handout 1: Traditional/KERA Model of Schooling
### (Adult Version)

| Traditional Model | KERA Model |
|---|---|
| **Age/ability grouping:**<br>Students are grouped by age (grades) and ability (slow readers, fast readers, etc.). | **Continuous progress:**<br>Each child progresses at his or her own rate without regard to age. |
| **Teacher-directed instruction:**<br>Teacher is the main source of information and directs all instruction in classroom. | **Student-directed instruction:**<br>Students learn through problem solving, research, group work, etc. They also participate in deciding what to study. |
| **Basic skills approach:**<br>Students learn basic knowledge through memorization, drill, and practice. | **Higher-order skills:**<br>Students learn to think, solve problems, and apply skills to real life. |
| **Single subjects:**<br>Each subject (reading, math, etc.) is taught separately. | **Subject integration:**<br>Subjects are integrated. |
| **Breadth of content:**<br>A great deal of subject matter is covered during the school year. | **Depth of content:**<br>Fewer topics are taught, but each is taught in greater depth. |
| **Tracking of students:**<br>Some students are more capable than others; level of instruction is geared to student capabilities. | **All can achieve at high levels:**<br>All children are capable of achieving at relatively high levels; all should be exposed to challenging content. |

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* Note: For use with final question on previous page

## Principal Interview, August 1999

1. How many teachers at your school finished their preservice training in 1995 or later?
    - What grades/subjects do they teach?
    - As a group, do they seem better prepared to teach under KERA than your veteran teachers?
    - Explain your answer (probe for descriptions of how new vs. veteran teachers teach).
    - Based on what you have seen from new teachers, do you believe colleges and universities are preparing teachers adequately to teach under KERA?
    - Do you have suggestions for improving teacher preparation?
2. What requirements did you have to fulfill to become a principal (e.g., type of certification, specific coursework requirements, internship)?
    - Were you adequately prepared to be a principal under KERA?
    - What were you most and least prepared for?
    - Do you have suggestions for improving principal preparation?
3. Describe how your ESS program is currently structured?
    - When is it held?
    - How are students selected to participate?
    - What is the focus of the program (e.g., improving on KIRIS, writing, bringing up classroom grades)?
4. Lamont and Orange Counties only: In what ways has your school used the Family Resource Center (Probe for information on whether or not the Center was used as a tool to help students overcome barriers to meeting KERA goals/expectations)?
5. Discuss possible dates for briefings (administrators over breakfast, teachers over lunch and into afternoon).
    - Find out how many teachers could be released on a given afternoon, with AEL paying for substitutes.

## Interview Protocol, 1998-99: Community Members

### Background

1. Are you a native of this county?
2. Describe your own educational and occupational background.
3. Have you had any involvement with the local schools? If so, describe.
    - If so, did you attend public schools here?
    - If not, where are you from and did you attend public schools there?
4. If attended local schools, what do you think of the education you received?
5. Do you (or did you) have children enrolled in public schools here?
    - Ages and schools attending?
    - What do you think of their education?
6. Do you consider local schools to be rural schools?
    - If not, why not?
    - If so, what does that mean to you?

    **Possible probes:** How are local schools different from urban/suburban schools? Are they more like or more different from urban/suburban schools?

### Beliefs/Philosophies

7. Contrast today's schools with schools at the time you received your education.
    - How are they different and alike?
    - Which is better, and why?
    - What still needs to change about schooling, and why?
8. What do you expect the schools to teach local youth by the time they graduate from high school?
    - Does that apply to ALL students?
    - If not, what do schools do with the ones who won't/can't learn those things?
9. What do schools need to do to teach those things you mentioned earlier?

10. In what ways should parents and the community be involved with the schools?
    - Is this sort of involvement happening locally? If not, why not?
11. Do you feel welcome to visit local schools?
12. Are you familiar with KERA?
    - If so, what do you know about it?
    - What do you think of it?
13. (Discussion of core pattern of schooling—present it along with the alternative, get their reactions to each piece—what they think their schools ARE doing and what they would LIKE their schools to be doing).

**Closing**

14. Is there anything more you would like to comment on?

## Phone Follow-up with Community Members, Spring 1999

### Traditional/KERA Pattern of Schooling

Provide an explanation similar to the following as a lead-in to this question: When I talked with you last fall, we briefly discussed the kinds of changes KERA is trying to bring about in schools. I have a follow-up question to that if you have a few minutes to talk with me. I want to go into a bit more depth about how the changes KERA is designed to bring about contrast with the way classrooms have traditionally been set up. I am going to list six different features of schooling, giving both the KERA way and the traditional way, and ask you to react to each. (Then read from Handout 2 and get a response.)

## Interview Protocol, 1998-99: Parents

### The Student

1. What do you think of the education your child is getting in fifth-grade?
2. Is your child allowed to learn at his or her own pace, or does the teacher try to keep everyone together?
    - How can you tell?
3. Has your child learned as much by this time as you would have expected?
4. Does your child enjoy school?
    - Does he or she enjoy this classroom?
    - What, specifically, does the child like or dislike about the school or classroom?
5. How has your child been doing in school?
    - How do you know?

    **Probe:** Any differences between fourth and fifth grade in

    - how your child has been doing?
    - how you've been notified of your child's progress?

### Parent Beliefs/Philosophies

6. What do you expect the school to teach your child
    - this year?
    - by the time he/she graduates from high school?
7. Has the school met its obligations to your child this year?
8. Provide an explanation similar to the following as a lead-in to this question: We have been reading a lot of the education research as we have begun to analyze the data from our study. Researchers have identified certain features of schooling that have been very resistant to change no matter what sort of reform effort is tried. KERA was designed to change many of these features of schooling, but we have seen that they have been difficult to change in Kentucky and elsewhere. These features, as well as the KERA contrast, are listed on Handout 2—I would like to go down the list and get your reactions. (Then have the respondent read each contrasting pair and give his or her reaction.)

Note: This question requires Handout 2.

## Rural

9. Do you consider your child's school a rural school?

    - If not, why not?
    - If so, what does that mean to you?

    **Possible Probes:** How is this school different from urban/suburban schools? Is it more like or more different from urban/suburban schools?

## Instructional Activities

10. Has your child kept a writing or math portfolio this year?

    - How much writing, and of what kind, has the child done this year compared to fourth grade?
    - How do you feel about the emphasis on writing under KERA?
    - How has it affected your child's (attitude or skills)?

11. What are some of the main things your child has learned or done this year?

12. What sort of instructional approaches have the fifth-grade teachers used?

    **Probes:** Pencil/paper activities, extended projects, hands-on activities, group work, portfolios, textbooks, worksheets

13. What kinds of tests has your child taken at school?

    **Probes:** Multiple-choice, open response, essay, demonstrations of knowledge

    - How often do they take tests?

## Parent Involvement

14. How does the teacher report to you about your child's progress in school?

    **Probes:** Conferences, report cards, homework sent home, papers sent home

15. What kind of involvement have you had in your child's classroom this year?

    **Probes:** Volunteer, room mother, field trips

16. Has your child's teacher requested the parents' help in any way so far this year? If so, describe.

17. Does your child bring schoolwork home? If so, what kinds of work?
    - Is your help required on the work? If so, how do you feel about that?
18. Do you feel welcome at school?
    - Do you feel welcome in your child's classroom?

**Closing**

19. Is there anything more you would like to comment on?

## Interview Protocol, 1998-99: Students

### Attitudes toward School

1. Have you enjoyed school this year?
   - What have been your favorite parts? Why?

   **Probe:** Classroom information (if they say recess or something like that)

   - What do you like about (things identified)
   - What parts don't you like? Why?

   **Probe:** Classroom information

   - What do you not like about (things identified)?
2. Who were your favorite and least favorite teachers this year? Why?

*3. Have your ever heard of KERA? If not, explain that it was a law to change Kentucky schools. Then give a lead-in similar to the following:

   - KERA was supposed to change the way teachers teach students in some important ways. I am going to tell you some of the ways classrooms used to be, compared to the way they are supposed to be now. I would like you to tell me if your classrooms still operate more in the old way or the new way, and what you think about each approach (let students look at Handout 2 but also read each feature to them, then get their reactions).

### Student Achievement

4. Has school been hard or easy this year?

   **Probe:** Specifics on subjects and types of assignments that are easy or difficult
5. How do the teachers let you know if you do well or not?
   - How does he or she let your parents know?

### Curriculum, Instruction, Assessment

6. What kind of tests have you had in your classroom this year?

   **Probe:** Item types
7. What did you think of the CATS test (hard, easy, fun, silly)?

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* Note: This question requires Handout 2.

- Did you practice for the test before you took it?

**Probe:** Open-response questions

8. Did you keep a writing or math portfolio this year?
    - How much writing have you done this year compared to fourth grade?
9. Do you ever (for each of these, ask: In what subjects? Describe?):
    - Work in groups or with a partner?
    - How does the teacher decide who is in a group or who is partners with whom?
    - Work on computers?
    - Work on experiments or projects?
    - Go on field trips?
10. Does everyone in your room do the same kinds of work at the same time (such as read in the same book during reading time or do the same worksheets for math)?
    - Do some kids do easier work and others harder?
    - Which groups are you in?
11. Can you get up and move around the room to get something or ask for help without asking the teacher's permission?
12. What rules do you have in the classroom?
    - What happens if someone breaks the rules?

**Ask Question 13 Only If There Has Been a Change in Principals since Last Year**

13. Who is the principal?
    - When do you see him or her?
    - Does he or she visit this room? How often? What does he or she do while here?
    - Do you like him or her? Why or why not?

**Parent/Community Involvement**

14. Do parents ever come to your room?
    - If so, what do they do?
    - How often do they come?
15. Does your mom or dad ever come to this room?
    - How often?
    - For what?

16. Do community members ever visit this school or your room?
    - If so, for what reason?
17. Do you or your family ever come to this school at night or on weekends? If so, for what purpose?

    NOTE: The purpose is to find out if the school is used for community events or parent activities.
18. How would you like to see parents and people from the community involved with your school?
    - Is this sort of involvement happening here? If not, why not?

**Closing**

19. Anything more you think I should know about you or this school?

### *Handout 2: Traditional/KERA Model of Schooling (Student Version)

| Traditional Model | KERA Model |
|---|---|
| **Age/ability grouping:**<br>Students are placed in grades (first, second, etc.) and sometimes in ability groups (such as different reading groups). Everyone in your grade or group learns the same thing at the same time; if you don't learn the material for that grade, you are retained and will repeat it next year. | **Continuous progress:**<br>Children learn at their own rates; if you are ready to do harder work, you do it even if the rest of the class does not. If there are some skills you haven't learned, you go back over just those skills rather than repeating an entire grade. |
| **Teacher-directed instruction:**<br>The teacher is in charge of what you do in the classroom. She teaches things to you using a textbook, telling you, or using other materials. You learn what she teaches you. | **Student-directed instruction:**<br>The teacher lets students help decide what to study. You learn about things by researching and doing projects together—not just the teacher telling you all the time. |
| **Basic skills approach:**<br>Students learn skills such as reading, multiplication tables, and spelling by memorizing and practicing; then they prove they know it by reciting or filling in bubbles or blanks on a test. | **Higher-order skills:**<br>Students learn skills such as how to solve problems, answer questions that require thinking, and use what they learn in real life. |
| **Single subjects:**<br>Each subject (reading, math, etc.) is taught separately. | **Subject integration:**<br>Subjects are integrated, such as connecting reading with social studies or science with math. |
| **Breadth of content:**<br>You learn a bit about many different topics each school year. | **Depth of content:**<br>You learn about fewer topics, but you learn a lot more about each of them. |
| **Tracking of students:**<br>Some students are able to learn more than others; smarter kids are given more challenging work to do. | **All can achieve:**<br>All children can do challenging work and should be given the opportunity to do so. |

* Note: This handout is used with question 3 of the previous student protocol and with phone follow-up of comunity members.

# Appendix H

## Characteristics of Target Students at Each School Studied

| School | Gender | | Ethnic Group | | | Special Education Status | |
|---|---|---|---|---|---|---|---|
| | Male | Female | White | Biracial White/Black | Hispanic | Special Education | Gifted and Talented |
| Kessinger Elementary | 3 | 3 | 6 | | | 1 | 2 |
| Riviera Elementary | 1 | 1 | 2 | | | | 1 |
| Newtown Elementary | 3 | 3 | 5 | 1 | | 1 | 2 |
| Orange Co. Elementary | 3 | 3 | 6 | | | 1 | |
| Vanderbilt Co. Elementary | 4 | 4 | 6 | 1 | 1 | 2 | 1 |
| Dyersburg Elementary | 1 | 1 | 2 | | | | 1 |

Note: Four of the study schools had no minority students in the target class of 2006.

# Appendix I

## Parents/Guardians of Target Students

| School | Gender | | Native of County | | Education Completed | |
|---|---|---|---|---|---|---|
| | Male | Female | Native | Nonnative | High School/GED/ Trade School or Less | College/ Plus |
| Kessinger Elementary | 2 | 5 | 5 | 1 | 3 | 3 |
| Riviera Elementary | | 2 | 1 | 1 | 1 | 1 |
| Newtown Elementary | 3 | 6 | 5 | 4 | 5 | 2 |
| Orange County Elementary | 1 | 6 | 4 | 3 | 4 | 2 |
| Vanderbilt County Elementary | 2 | 8 | 8 | 2 | 7 | 2 |
| Dyersburg Elementary | | 2 | 1 | 1 | 2 | |

Note: Researchers did not determine native status and education completed during the interviews with some of the parents, so those totals will not add up to the number of parents interviewed for some schools.

# Appendix J

## Community Members Interviewed

| District | Gender |  | Native of County |  | Education Completed |  |
|---|---|---|---|---|---|---|
|  |  |  |  |  | High School/GED/Community College/Vo-Tech | Four-Year College/Plus |
|  | Male | Female | Native | Nonnative |  |  |
| Lamont County | 5 | 2 | 6 | 1 | 4 | 3 |
| Newtown Independent | 2 | 2 | 3 | 1 |  | 4 |
| Orange County | 1 | 2 | 3 |  | 2 | 1 |
| Vanderbilt County | 3 | 1 |  | 4 |  | 4 |

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From 1990 through 2000 AEL, Inc. conducted a qualitative study of the implementation of the Kentucky Education Reform Act of 1990 (KERA) to provide feedback to policymakers on the evolution of an ambitious, statewide systemic reform effort in a predominantly rural state. The study focused on the implementation of KERA in four small, rural school districts in western, central, and eastern Kentucky. After 1995—when reform had been in place long enough that one might expect changes in classroom education—AEL researchers concentrated on assessing the effects of KERA on curriculum, instruction, and student learning in six elementary schools in the four districts.

This report addresses four basic research questions, examined during the implementation of KERA in six Kentucky elementary schools:

1. To what extent and under what conditions did the schools help all students achieve KERA goals?
2. To what extent and under what conditions did the schools implement curriculum, instruction, and classroom assessment practices consistent with reform goals?
3. To what extent and under what conditions did the schools make key decisions about how to improve student learning?
4. Did the implementation of the primary program contribute to KERA goals?

Systemic reform in Kentucky resulted in curricula that are more focused and aligned with state standards and in classrooms that are better equipped as well as more interesting, active, and enjoyable. Evidence from various assessment measures indicates that under KERA, student achievement has improved, at least at the elementary level. To realize its potential, the KERA effort must be sustained, with increased attention given to helping teachers create classrooms that develop basic knowledge and higher-order thinking skills for each and every child.

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ISBN 1-891677-09-8
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